

Trends in health systems in the former Soviet countries



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Trends in health systems in the former Soviet countries

Edited by

Bernd Rechel, Erica Richardson , Martin McKee

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Foreword

The countries of the former Soviet Union (FSU) over the last 20 years have experienced an impressive transformation. Fundamental change has occurred in almost all aspects of political, economic and social spheres. The market economy and new freedoms have generally positively impacted citizens' lives but access and financial protection within the national health systems as well as health status of the population more generally have not kept pace and are still considerably worse than in other countries of similar economic performance. Health and social protection systems were slow to adapt to the rapid epidemiological and demographic change, characterized by a preponderance of noncommunicable diseases, health issues linked to lifestyle choices and challenges related to an ageing population. At the same time, as in most countries of the former Soviet Union, once the economy opened and information started to flow more freely, consumer expectations started to rise across the board. In the health sector, this resulted in high growth rates of private health expenditure, mostly related to high-end tertiary care services, branded pharmaceuticals and the use of expensive medical technology – often with a limited evidence base. Those who could not afford high formal and informal out-of-pocket (OOP) expenditure were increasingly at risk to either forego or postpone necessary medical interventions. When confronted with a catastrophic health event, the middle classes and the poor often experienced the impoverishing effects of a health system lacking social solidarity, such as proper mechanisms of risk pooling and strong regulation as part of functioning health insurance mechanisms.

The public health domain also suffered a significant deterioration during the transition years. Lack of funding, the adherence to an outdated paradigm of infectious disease control and limited opportunities for modern public health training and research undermined the effectiveness of population-based interventions. In many countries of the FSU the notion of individual and population health is still seen through the lens of medical care for diseases only, hence missing opportunities for leveraging cross-sectoral interventions to improve health status. Political leaders are often not cognizant of the importance of social determinants of health when considering policy and are often reluctant to use a Health in All Policies approach to harness the contribution of other

sectors of the economy to improve population health. The growing influence of powerful lobbies often combined with corrupt and unclear practices also contributed to a lack of progress with reforming and modernizing the health sector.

This latest book of the European Observatory series is an important tool for policy-makers as it attempts to systematically assess the health systems performance of 12 FSU countries using the time tested framework established by the *Health in Transition* series. The book sheds light on the persistent and often widening health gap between featured FSU countries as compared to countries of similar economic performance elsewhere. The authors make a compelling case in pointing out the concern for equity among and within countries when it comes to health status of the population. In addition to the well-organized text, many tables and figures in the book show the comparative evidence with regard to many aspects of the FSU countries' health system performance. The reader will learn about individual countries' challenges with regard to providing financial protection as well as access to care, the need to guarantee a minimum of service quality and the results of uneven capacity to regulate both the affairs of the public and private sectors. The book offers insights about the efficiency and effectiveness of different health systems, while at the same time stressing the need for transparency and political accountability.

The World Bank as a founding member of the European Observatory on Health Systems and Policies has been for the past two decades and continues to be deeply engaged in the health sector in the countries of the FSU. We recognize that improving the performance of the health sector requires a long-term view, a sustained effort of engagement and a policy lens that understands the cross-sectoral nature of health outcomes. The World Bank also made a commitment to invest in the health sector, understanding its pivotal role in achieving the Bank's dual goals of eliminating poverty and fostering shared prosperity. As such this work will also help our staff and our country clients and partners to better understand the prevailing evidence of health system performance, while also learning about viable options for helping countries to improve the health and well-being of their populations.

Dr Armin Fidler

The World Bank

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List of abbreviations

ALOS	average length of stay
CIS	Commonwealth of Independent States
CPD	continuing professional development
DALY	disability-adjusted life-year
DRG	diagnosis-related group
ECG	electrocardiogram
EEA	European Economic Area
EML	essential medicines list
EU	European Union
FAP	<i>feldsher</i> –midwife point
FTE	full-time equivalent
GDP	gross domestic product
GMP	good manufacturing practice
GP	general practitioner
HiT	Health Systems in Transition
IDP	internally displaced person
ILO	International Labour Organization
MDR-TB	multidrug-resistant tuberculosis
NGO	nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
OOP	out-of-pocket payment
OPH	Ordinary Psychiatric Hospital
PPP	purchasing power parity
san-epid	sanitary-epidemiological
SPH	Special Psychiatric Hospital
SWAp	sector-wide approach
TB	tuberculosis
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USSR	Union of Soviet Socialist Republics
VAT	value added tax
WHO	World Health Organization
XDR-TB	extensively drug-resistant tuberculosis

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Chapter 1

Introduction

Bernd Rechel, Erica Richardson, Martin McKee

Analysing post-Soviet health systems

The break-up of the Soviet Union in 1991 not only changed the political map of Europe and central Asia but also brought about many other fundamental changes in the countries affected, including economic collapse and, in some places, war. Each country had to build a new national identity, with new constitutions, political systems, the symbols of nationhood and new ways of doing things, including the provision of health services. The post-Soviet countries had inherited the Soviet Semashko system of health care but, despite its achievements in ensuring universal coverage, many of those in positions of power expressed discontent with what they saw as its poor quality, inefficiency and lack of responsiveness. They called for change, but were less clear about how to bring it about, especially at a time of severe fiscal constraints and lack of personnel trained in concepts of modern medicine.

More than two decades on from those momentous events, this book reviews the progress that has been made in reforming health systems in 12 countries that emerged from the former Soviet Union: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. It excludes the three Baltic states (Estonia, Latvia and Lithuania) as these have taken a course that is quite distinct from the others, assisted by the process of acceding to the European Union (EU) in 2004, along with the associated financial and technical assistance that accompanied that process.

The book builds on the extensive country monitoring by the European Observatory on Health Systems and Policies through its *Health Systems in Transition* (HiT) health system reviews but also draws on additional sources of information. The HiT series covers the WHO European Region as well as some additional countries that belong to the Organisation for Economic Co-

operation and Development (OECD) and provides detailed country-based reports on health systems and policies that are regularly updated. The health system reviews are based on a common template that is revised periodically (Rechel, Thomson & van Ginneken, 2010).

Although the use of a common HiT template is designed to help others undertake cross-country comparisons, too often this second step of analysis has not been undertaken. Yet, there are exceptions that have shown the value of comparative health policy analysis based on the Observatory's health system reviews, such as work on the Baltic states (van Ginneken et al., 2012), the central Asian countries (Rechel et al., 2012), the Nordic countries (Magnussen, Vrangbæk & Saltman, 2009), countries with health systems based on social insurance funding (Saltman, Busse & Figueras, 2004) and earlier work on the countries emerging from the Soviet Union (Rechel et al., 2013). The present volume aims to build on and expand this comparative work. A sister volume examines trends in health systems in countries of the EU and the European Economic Area (EEA) (van Ginneken et al., 2014).

Cross-country comparisons of health systems and policies explicitly analyse the differences and similarities between national health systems and policies. They constitute a diverse interdisciplinary field of study that deals with entities of substantial complexity (Cacace et al., 2013). Comparative studies of health systems and policies can serve three principal purposes: learning about national systems and policies, learning why they take the forms they do, and learning lessons from other countries for application elsewhere (Marmor, Freeman & Okma, 2005). We hope that the present volume offers insights from all three perspectives. Crucially, however, comparative analysis of health systems and policies must not only pay attention to health system characteristics and the policies that have been adopted, but also to the outcomes that different arrangements achieve and whether health reforms deliver the promised results (Marmor & Wendt, 2012). These are questions discussed throughout this book.

The post-Soviet countries discussed in this volume offer particularly fascinating material for comparative health policy analysis since they share a common legacy and very similar starting points, yet embarked on widely varying developments after gaining independence in 1991. As such, they are similar to the countries emerging from Czechoslovakia (Bryndová et al., 2009; Szalay et al., 2011) and Yugoslavia (Bartlett, Bozikov & Rechel, 2012). Examining post-Soviet health systems and policies thus benefits from clear temporal and spatial boundaries and an explicit choice of comparator countries (Pierson, 2003).

The different paths of development followed by the post-Soviet countries are partly due to the wider socioeconomic and political context of the 12 countries

discussed in this volume but it is argued below that they are also the result of conscious political decisions that afforded health a higher or – more often – lower priority on government agendas. Other countries in the region and elsewhere can learn from the effects these and other health policy decisions had on the functioning and performance of health systems and thus avoid repeating the same mistakes. Yet, much of the focus of the international literature has been on countries in central and eastern Europe that have acceded to the EU in recent years, and much less attention has been paid to the former Soviet countries that have remained outside it (Rechel et al., 2013). This volume aims to redress this imbalance.

The primary audience of the book comprises those with an interest in health systems and policies in the post-Soviet countries but the book also offers lessons for other countries in Europe and elsewhere. It seeks to be useful to health policy-makers, government advisers, nongovernmental organizations (NGOs), researchers, health professionals and the general public.

The volume applies a functional perspective on health systems, based on the assumption that all health systems perform a set of core functions. These can be defined as groups of interdependent activities that every health system undertakes to achieve its goals. These functions are descriptive and non-normative (Durán et al., 2012) and include organization and governance, financing, the provision of physical and human resources, and the provision of health services.

Structure of the book

The structure of the book largely follows the structure of the Observatory's health system reviews. After this introductory chapter, Chapter 2 analyses health trends in the post-Soviet countries. It begins by exploring how life expectancy and mortality have evolved, the main causes of death and the reliability of official vital statistics in the region. The chapter then turns to a discussion of morbidity and the burden of disease with a particular focus on the often neglected areas of infectious diseases (mainly HIV/AIDS and tuberculosis (TB)) and mental health. The authors then discuss the most immediate risk factors behind the observed mortality and morbidity patterns, in particular alcohol and tobacco consumption, as well as diet and physical activity.

Chapter 3 discusses organization and governance arrangements. It examines the key actors in individual health systems, including the important role played by ministries of finance and, often, by local administrations. The chapter then analyses trends in decentralization and recentralization, which in some countries have led to a fragmentation of responsibilities and financing with

frequent concerns about capacity at the regional and municipal levels and inequities between regions within a given country. Privatization was another form of decentralization, although this was limited in most countries to dental care, pharmacies, and manufacturers of medicines and medical equipment. The chapter then discusses the areas of regulation and health information management. A final section is concerned with patient involvement and patient rights, which have often remained tokenistic.

Chapter 4 analyses health financing. It begins by describing trends in overall health expenditure levels, both in terms of their percentage of gross domestic product (GDP) and per capita expenditure. The chapter then discusses sources of revenue, delineating in particular the major differences across countries in their reliance on private out-of-pocket (OOP) expenditure, which is of greatest concern in Georgia, Azerbaijan and Tajikistan. This is followed by a discussion of benefit packages in terms of their population coverage, the range of benefits to which covered people are entitled and the extent of user charges. The author then describes key features of statutory financing systems including, in some countries, mandatory health insurance systems. Subsequent sections describe the greatly varying arrangements for pooling health financing and the evolving mechanisms for paying health-care providers and health workers. A discussion of other sources of health financing, including OOP payments, external sources of funds, parallel health systems and voluntary health insurance completes the overview of health financing sources.

Chapter 5 explores issues around the health workforce. It describes trends in the numbers of various categories of health workers and the changing arrangements for training, specialization and continuous professional development. The chapter discusses attempts by many countries in the region to strengthen the education of health workers (both physicians and nurses) in family medicine and to upgrade the training of nurses. Attracting health workers to rural and remote areas and retaining them there is another challenge many post-Soviet countries share.

Chapters 6–10 analyse key elements of health service provision. Chapter 6 describes the changing arrangements for public health, such as the changes in the organization of public health services in the post-Soviet countries, which have seen an expansion of the traditional sanitary-epidemiological model of public health in many countries. The chapter then describes arrangements for financing public health, pointing out major gaps in available data. Four key areas of public health are then discussed: health protection (mainly environmental and occupational health), disease prevention (such as through vaccination), health promotion and intersectoral action for health. Across the region, the

need for stepping up action in the latter two areas (health promotion and intersectoral action) has been recognized.

Chapter 7 explores the development of primary health care, which was a major focus of health reforms in the region. The chapter maps reform trajectories, describing which countries went furthest in the introduction of general practice or family medicine and what measures they have undertaken. It then describes current settings and models of primary health care and how services are provided. This includes an overview of the extent to which free choice of physicians has been enacted, the current state of gatekeeping and referral systems, the changing legal status of primary health-care providers and the mechanisms used for paying them. The chapter concludes by discussing how far access to and quality of primary health care are currently ensured and what challenges remain.

Chapter 8 provides an overview of secondary and tertiary care in the former Soviet countries. After describing how these levels of care evolved in the Soviet period, the chapter outlines trends in hospital infrastructure since the countries gained independence and discusses key performance indicators such as average length of stay and hospital bed occupancy rate. It then analyses current organizational arrangements in urban and rural areas and the different categories of hospitals in place, including in the countries' parallel health systems and in emergency care. Finally, the chapter explores the accessibility and quality of specialized and inpatient care.

Chapter 9 discusses pharmaceutical care. It describes how pharmaceutical production in the Soviet period was concentrated in what is now Ukraine, the Russian Federation and Belarus and how this still affects capacities for domestic pharmaceutical production, which remain very low in the countries of central Asia and the south Caucasus. The chapter continues by describing challenges of regulation and the problem of fake or poor quality pharmaceutical products, as well as the easy access to nominally prescription only pharmaceuticals (and especially antibiotics) over the counter at pharmacies. This is followed by a discussion of policies to control the prices of pharmaceuticals, which have become a major component of private OOP payments for health. The chapter then discusses ongoing measures to improve cost-effectiveness through the use of generics and to improve access to essential medicines by the population.

Chapter 10 describes the current state of mental health care. It begins by outlining the approach taken in the Soviet period, which relied to a large degree on the marginalization of people with mental health problems, their institutionalization and the abuse of psychiatry for political purposes. The chapter then provides an overview of how almost all post-Soviet countries have sought

to move away from this problematic legacy, detailing current arrangements for the organization and provision of mental health services. A crucial distinction concerns specialist mental health care and mental health services provided in primary health care, which countries have sought to expand. The chapter goes on to discuss the human resources available for mental health care, which vary greatly across post-Soviet countries. A final section of the chapter is concerned with the accessibility, adequacy and quality of mental health services.

Chapter 11 provides an overview of how well health systems of the region perform in achieving their goals. It begins by analysing the goal of financial protection and equity in financing, pointing to a high risk of catastrophic or impoverishing expenditure on health in many post-Soviet countries, in particular those with high levels of private OOP payments. The chapter then discusses user experience and equity of access. Information on public and patient satisfaction is still sparse and there are few, if any, patient satisfaction surveys in many countries. Equity of access is undermined by financial and geographical barriers, again with high levels of OOP payments being one of the main concerns. The chapter then explores health outcomes, health service outcomes and quality of care. Using the concepts of amenable mortality and tracer conditions, the authors argue that health systems in the region could do much better in improving population health, even with current resources. The next section discusses the allocative and technical efficiency of health systems and identifies a continued reliance on hospital care as one of the main factors undermining both types of efficiency. Finally, the chapter discusses the transparency and accountability of post-Soviet health systems.

The concluding chapter – Chapter 12 – summarizes the key findings of this volume, the lessons learnt and the challenges remaining. It makes the case for investing in health and argues that there is a huge untapped potential to afford health a higher place on the political agendas of most countries of the region, strengthen intersectoral public health action against the main immediate threats to population health (such as addressing alcohol and tobacco consumption through stronger regulation and tax increases), and improve the provision, quality, financing and governance of health care.

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Chapter 2

Health trends

Bayard Roberts, Marina Karanikolos, Bernd Rechel

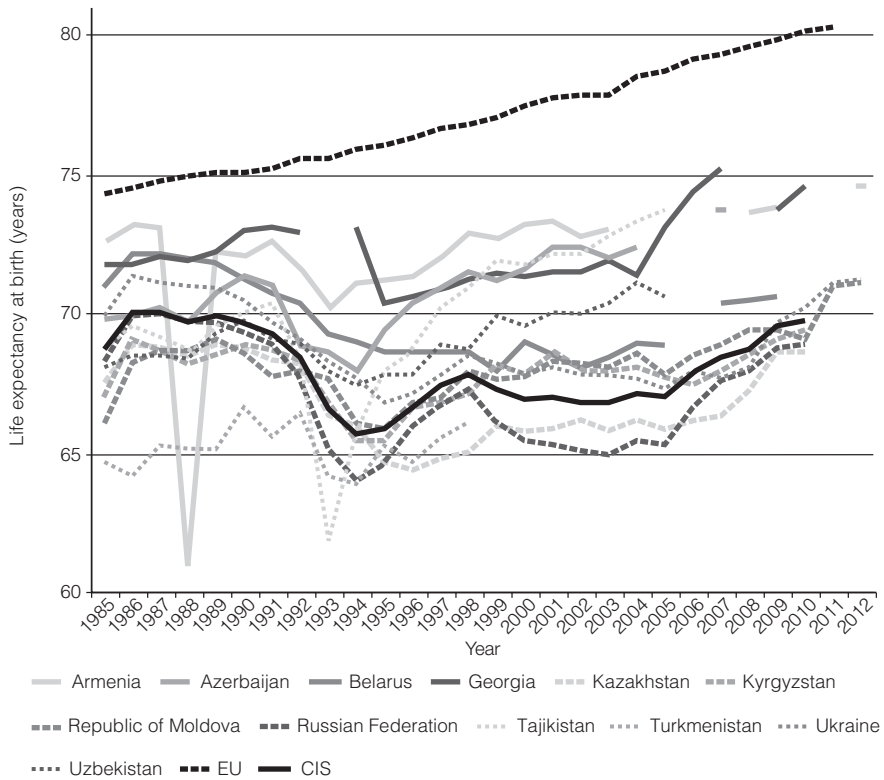
Introduction

The health of people in the former Soviet countries deteriorated dramatically after the collapse of the Soviet Union, although the first signs of deterioration were already visible in the second half of the 1980s. Some improvements have been observed in recent years, but health indicators in many post-Soviet countries have not yet reached the levels of the late 1980s. This chapter provides an overview of mortality and morbidity patterns in the 12 countries of the former Soviet Union considered in this volume. It then describes key risk factors for health in the region, focusing on alcohol consumption; tobacco use; obesity, nutrition and physical activity; and water and sanitation.

Life expectancy and mortality

Life expectancies in the countries of the former Soviet Union lag far behind those in western Europe. The divergence started in the 1960s, when life expectancy in the Soviet Union began to stagnate (Andreev et al., 2003; Mackenbach, 2013). Notable but short-lived improvements occurred in the late 1980s, linked to President Gorbachev's anti-alcohol campaign (Leon et al., 1997). However, life expectancy declined dramatically in the first half of the 1990s, particularly for males. While there were large drops in life expectancy in Armenia in 1988 (as a result of a major earthquake in Spitak) and Tajikistan in 1993 (due to the civil war), even in countries unaffected by natural disaster or war declines were substantial. This was most pronounced in the Russian Federation, where male life expectancy fell by 6.2 years between 1990 and 1994, from 63.8 to just 57.6 years. Following the rouble crash in 1998, the fragile improvement up till then was arrested and life expectancy only began to improve again after 2006. Other countries in the region have followed a similar trend, with a marked decline in the first half of the 1990s, and a subsequent slow recovery. Some countries

Fig. 2.1 Officially recorded life expectancy at birth, 1985–2012



Source: WHO, 2014.

in the region are yet to reach the level of life expectancy they had more than 25 years ago (Fig. 2.1). While variation persists among countries, the region overall has the lowest life expectancy in Europe.

However, officially reported data may overestimate the true life expectancies in many of these countries, in particular in central Asia and the south Caucasus, mainly due to an underreporting of infant and child mortality (Aleshina & Redmond, 2003), but also due to overestimates of population sizes that have been depleted by migration (Yeganyan et al., 2001). Table 2.1 shows WHO estimates of life expectancy in the region, which are substantially lower than values that some countries report officially.

The main reason for the low life expectancy compared to western Europe is the very high burden of premature mortality, particularly in males of working age. In 2010 a 20-year old man in the Russian Federation had, given 2010 mortality rates, a 64% chance of reaching the age of 60 compared with a 91% chance in western Europe (Rechel et al., 2013). Another reason is infant mortality, which, at 11.2 per 1000 live births in the region as a whole in 2010, was almost three

Table 2.1 *Official and estimated life expectancies, latest available year (in parentheses)*

	Official data	WHO estimate (2011)	Difference
Armenia (2012)	74.6	71	-3.6
Azerbaijan (2007)	73.7	71	-2.8
Belarus (2009)	70.6	71	0.4
Georgia (2010)	74.7	72	-2.7
Kazakhstan (2010)	68.6	67	-1.6
Kyrgyzstan (2010)	69.5	69	-0.5
Republic of Moldova (2012)	71.1	71	-0.1
Russian Federation (2010)	69.0	69	0.0
Tajikistan (2005)	73.7	68	-5.7
Turkmenistan (1998)	66.1	63	-3.1
Ukraine (2012)	71.3	71	-0.3
Uzbekistan (2005)	70.5	68	-2.5

Source: WHO, 2014.

times higher than the EU average of 4 per 1000 live births (WHO, 2014). This is a particular concern in central Asia. Data from Demographic and Health Survey Program suggest that already high official rates (reported from all central Asian countries except Turkmenistan) underreport infant mortality, with survey results 1.4–3 times higher, depending on the country (DHS, 2012). In Kyrgyzstan, for example, estimates based on surveys and censuses exceeded routine vital registration figures by a factor of two until the early 2000s when, with the introduction of new live birth criteria, the gap between the two sources finally started closing (Guillot et al., 2013). Child mortality is also high, while maternal mortality reached an official rate of 47.5 maternal deaths per 100 000 live births in Kyrgyzstan in 2011, compared to a rate of 5.1 in the EU (WHO, 2014). Turkmenistan reported a maternal mortality rate of 3.8 per 100 000 live births in 2012 (WHO, 2014) but this, like many other health indicators reported from Turkmenistan, is hardly credible.

The main immediate causes of adult mortality are diseases of the circulatory system (most notably cardiovascular diseases), cancers and external causes such as injuries, violence and poisoning. Age-standardized death rates from diseases of the circulatory system were about three times higher in Kyrgyzstan (702 per 100 000 population), the Russian Federation (674) Ukraine (667) and the Republic of Moldova (659) in 2010–2012 than in the EU (212). The gap for males is particularly pronounced up to the age of 64, with death rates in the Russian Federation in 2010 (336 per 100 000 population) more than five times higher than in the EU (64 per 100 000) (WHO, 2014).

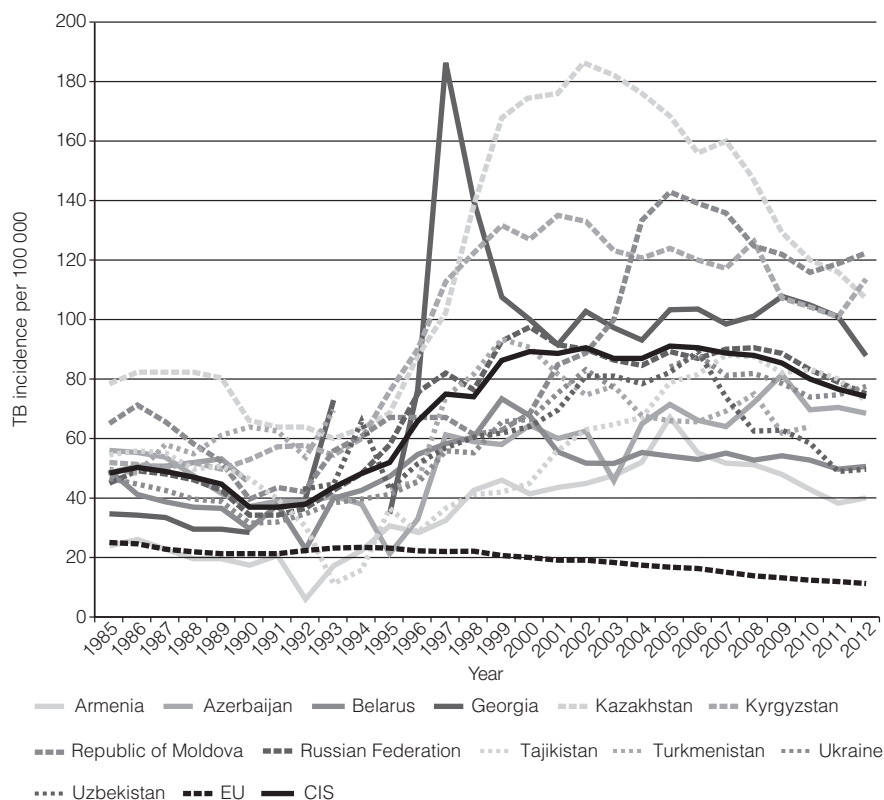
While deaths from all cancers are lower than in western Europe, there is substantial variation by type of cancer and gender. Thus, mortality from lung cancer among men is higher than in western Europe in the Russian Federation, Belarus, Ukraine, Kazakhstan and Armenia, while among women it is much lower in all post-Soviet countries, reflecting historically low smoking rates among women.

With the exception of the countries of the south Caucasus, death rates due to external causes of death in the region are also much higher than in western Europe, reaching 141 per 100 000 population in the Russian Federation in 2010, compared to 35 per 100 000 in the EU (WHO, 2014). Transport accidents are one of the leading causes, with double the rate of deaths in the region compared to the EU in 2010 (15.4 and 6.4 per 100 000, respectively). Interpersonal violence is also a leading cause; even after a substantial decline from very high levels in the 1990s it still remains well above levels in the EU. For example, in the Russian Federation in 2010 there were 20.5 male deaths from homicide and intentional injury per 100 000 population, compared to only 1.2 in the EU (WHO, 2014). There was also a dramatic increase in male suicides in the 1990s, particularly in the Russian Federation, Belarus, Kazakhstan and Ukraine, attributed to the stress of unemployment, impoverishment, rising inequalities, uncertainty and social alienation (Andreev et al., 2008). While suicide rates have declined in these countries in the intervening years, they remain 1.7 times higher than the EU average (WHO, 2014).

Morbidity

Although the overall burden of disease in the region is dominated by the noncommunicable diseases noted above, there is also a persisting threat from infectious disease, in particular HIV/AIDS and TB. Infection control was relatively successful in the Soviet Union but communicable disease surveillance, prevention and control systems were significantly weakened after the dissolution of the Soviet Union. New problems also emerged, most notably multidrug-resistant tuberculosis (MDR-TB) and HIV/AIDS.

In the 1990s TB incidence rates increased steeply in all countries of the region and progress in reducing them in the 2000s has been uneven, with some countries making noticeable improvements, but others still struggling (Fig. 2.2). Estimated incidence rates are even higher, reaching 193 per 100 000 population in Tajikistan in 2011, the highest rate in the WHO European Region (WHO, 2014). The reasons for the resurgence of TB are complex and include an initial collapse in services for detection and treatment, as well as, in some countries, the consequences of high levels of alcohol consumption, which

Fig. 2.2 Officially recorded TB incidence per 100 000 population, 1985–2012

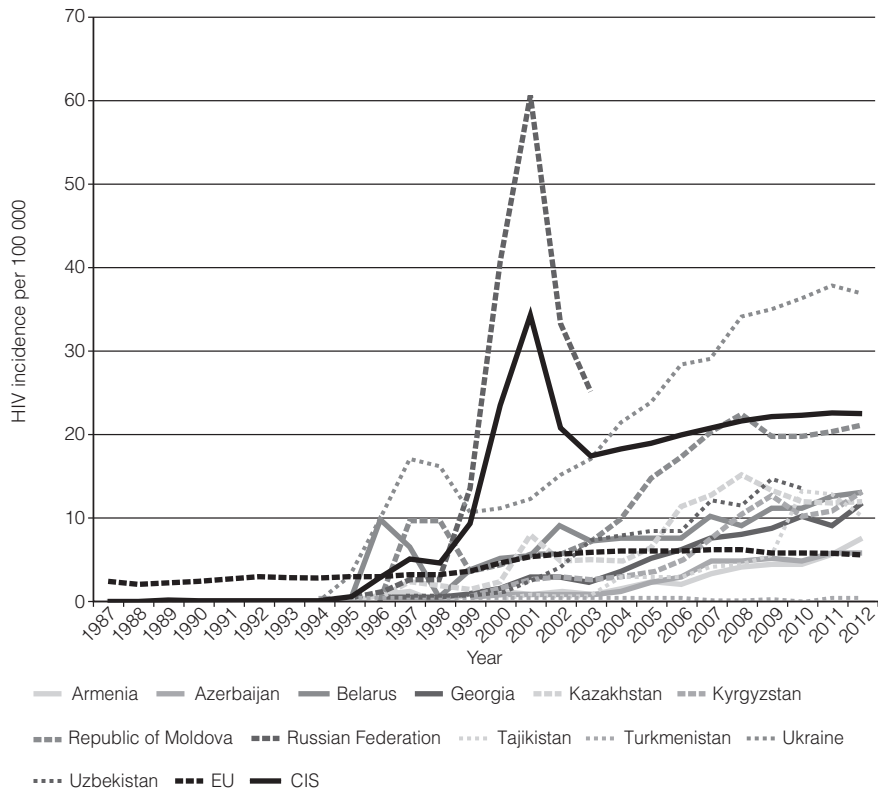
Source: WHO, 2014.

increases susceptibility to infection and decreases compliance to treatment (Lonnroth et al., 2008). The high rate of incarceration is also a factor (Coker et al., 2006), with prisons being high-risk environments that act as incubators of disease (Stuckler et al., 2008), while treatment and prevention services in prisons tend to be underdeveloped, not only for TB, but also for a range of other conditions (Møller et al., 2005). Worryingly, a number of former Soviet countries have among the highest recorded rates of multidrug and extensively drug-resistant tuberculosis worldwide (Zignol et al., 2012), which are much more expensive and complicated to treat (WHO 2011b).

HIV/AIDS is another major concern in the region. For several years, some of the former Soviet countries, including the Russian Federation and Ukraine, experienced the fastest growing HIV epidemics in the world, with the vast majority of reported infections attributed to injecting drug use (Field, 2004). However, most governments in the region have been slow to respond adequately to the problem (Field, 2004). The scale and scope of HIV programmes remain inadequate, in particular with regard to harm reduction measures, substitution

treatment and antiretroviral treatment (Open Society Institute, 2008; UNAIDS, 2008). One of the major barriers to improving access to HIV prevention and treatment in the former Soviet countries is the predominance of a punitive approach to injecting drug use and people living with HIV (Bernitz & Rechel, 2006; Rechel, 2010). This approach is also reflected in the limited availability of antiretroviral treatment for people living with HIV. Coverage with harm reduction programmes remains low in many countries of the region and largely relies on external donors. Substitution treatment with buprenorphine or methadone remains illegal in the Russian Federation and unavailable in some other countries of the region. Harsh policies on drugs in many countries of the former Soviet Union have had particularly harmful consequences for access to HIV testing, counselling and harm reduction interventions (Sarang, Stuikeyte & Bykov, 2007; Platt et al., 2013). In many countries of the region, official HIV incidence rates show an upward trend (Fig. 2.3) and HIV prevalence in 2010 was believed to be 1% or higher in the Russian Federation and Ukraine (UNAIDS, 2010).

Fig. 2.3 Officially recorded HIV incidence per 100 000 population, 1987–2012



Source: WHO, 2014.

The *Global Burden of Disease study 2010* reported that mental and behavioural disorders accounted for around 9% of total disability-adjusted life-years (DALYs) in the region in 2010, rising to around 20% in the age group 10–35 years (IHME 2013). The main mental and behavioural disorders contributing to this burden are major depressive disorder (men and women, all ages) and alcohol use disorders (men, particularly aged 15–69) (IHME, 2013). However, data on mental disorders in the former Soviet countries remain extremely limited (Ferrari et al., 2013). A study on psychological distress indicated that the prevalence of high psychological distress had reduced across the region between 2001 and 2011, as the social and economic situation became more stable, but that socially and economically marginalized populations continued to bear the brunt of poor mental health in the region (Roberts, Abbott & McKee, 2012). Mental health services have also struggled to modernize and generally remain outdated, of poor quality and overly reliant on institutionalizing people with mental disorders (see Chapter 10).

Key risk factors

Health outcomes in the region have been heavily influenced by adverse underlying circumstances, particularly poverty, which is widespread in many parts of the region, and the rapid societal change in settings in which social safety nets were either absent or severely weakened (Walberg et al., 1998; Stuckler, King & McKee, 2009). However, while poverty levels generally stabilized and then declined somewhat over the 2000s, wide income inequalities have emerged, with severe consequences for the poorest and most vulnerable population groups. Key proximal risk factors behind the mortality and morbidity patterns include alcohol and tobacco use, with diet and activity levels also contributing to obesity and cardiovascular disease. Inadequate treatment and weak health policies also play a key role and are addressed in more detail in subsequent chapters of this volume.

Alcohol

Alcohol consumption has long been high in the majority of post-Soviet countries. The anti-alcohol campaign led by President Gorbachev in the mid-1980s reduced alcohol consumption and lowered alcohol-related mortality but these gains were wiped out as hazardous alcohol use increased rapidly after the collapse of communism (Krasovsky, 2009; Nemtsov, 2011). This increase has been linked to the social stress, uncertainty and impoverishment that arose during the collapse of the previous state system, coupled with growth in the illicit production of spirits and the sharp decline in vodka prices as a result

of the deregulation of the alcohol industry and the transition to a market economy, leading to substantial increases in the availability of cheap alcohol (Moskalewicz & Simpura, 2000; Leon, Shkolnikov & McKee, 2009; Treisman, 2010; Nemtsov, 2011; FAO, 2013).

WHO estimates that alcohol consumption in the post-Soviet countries remains higher than in any other region of the world (WHO, 2011a). However, there is wide variation among countries, ranging from an average of 18 L of pure alcohol consumed per person annually in the Republic of Moldova to around 15 L in the Russian Federation, Ukraine and Belarus, 6 L in Georgia, Kazakhstan and Kyrgyzstan, and 2 L or less in Uzbekistan, Turkmenistan and Azerbaijan. Islamic traditions in parts of the south Caucasus and central Asia have kept alcohol consumption low in most of these countries. However, statistics on alcohol consumption also remain unreliable and many estimates based on surveys are likely to be under-estimates, given the tendency for individuals to under report their own alcohol consumption and for the heaviest drinkers to be omitted from household surveys (Leifman, 2002; Nemtsov, 2003). However, it is not only the volume of consumption; there is also a major concern about the pattern of consumption, particularly 'episodic heavy drinking', where large amounts of alcohol are consumed in a short period of time. Data from 2005 indicate that the Russian Federation and Ukraine have the most 'risky' pattern of drinking globally, closely followed by Belarus, Kazakhstan and the Republic of Moldova (WHO, 2011a).

The health impacts of the increases in hazardous alcohol consumption have been grave, with alcohol being the principal cause of the rapid fluctuations in mortality that have characterized the Russian mortality crisis (Shkolnikov, McKee & Leon, 2001; Nicholson et al., 2005). In a retrospective case-control study in the Russian Federation, Zaridze et al. (2009) attributed 59% of deaths among working-age men and 33% of deaths among working-age women in the 1990s to alcohol. Earlier work by Leon et al. (2007) estimated that 43% of mortality among working-age men between 2003 and 2005 in a typical Russian city was attributable to hazardous drinking. A prospective observational study of 151 000 adults in three Russian cities from 1999 to 2008 reinforced this evidence that alcohol (and vodka particularly) is a major cause of the high risk of premature death in Russian adults (Zaridze et al., 2014). The immediate causes of alcohol-related deaths are alcohol poisoning, pneumonia, injuries, suicide and in particular alcohol-related cardiovascular disorders, with heavy drinking now known to increase blood pressure and reduce blood clotting, with transiently high levels of blood ethanol inducing cardiac arrhythmia (McKee & Britton, 1998; Malyutina et al., 2002; Nilssen et al., 2005; Zaridze et al., 2009; Leon et al., 2010). These are typically seen with high frequency and volume of

alcohol consumption and intensive drinking binges, particularly of spirits and surrogates such as home-produced spirits, aftershaves, medicinal compounds and cleaning agents (Nicholson et al., 2005; Leon et al., 2007; Gil et al., 2009; Leon, Shkolnikov & McKee, 2009).

Poorer and less educated men appear to be bearing the brunt of the alcohol mortality crisis in the Russian Federation (Chenet et al., 1998; Tomkins et al., 2007) but further research is required to better understand the determinants of hazardous alcohol consumption and the mechanisms by which alcohol increases cardiovascular deaths (Leon, Shkolnikov & McKee, 2009; Murphy et al., 2012). Encouragingly, there appears to have been a shift in the 2000s in the Russian Federation towards beer consumption and away from spirits, particularly among younger age groups, which may reflect the potential emergence of a more moderate drinking culture (Jargin, 2010). However, this change may also reflect the influence of transnational alcohol companies targeting young people and encouraging drinking initiation at an earlier age, particularly given that in Russian law beer was classified as a non-alcoholic beverage until 2013.

Governments in the Soviet and post-Soviet eras have contributed substantially to the alcohol problem through the production and distribution of cheap alcohol, as well as weak alcohol control policies (Gil et al., 2010), which have been undermined by illegal alcohol production and a powerful alcohol lobby (Nemtsov, 2011). The sustained reduction in alcohol-related mortality in the Russian Federation since the imposition of a tough new law on manufacture and distribution in 2006 shows what can be achieved (Shkolnikov et al., 2013). A range of policy measures is available. In the Republic of Moldova, for example, interventions included limiting access to alcohol during night-time hours, increasing the minimum price for spirits, increasing excise taxes, decreasing legal blood alcohol limits when driving, and conducting a nationwide communication campaign. While price increases have also been implemented in Kazakhstan and proposed in Belarus and Ukraine, more concerted action is still required to meaningfully address the demand and supply of both legal and illegal alcohol in the post-Soviet countries.

Tobacco

Heavy smoking among men was the norm in the Soviet era, with cheap and easily available cigarettes. The cigarette market was transformed in the early 1990s when borders opened to the transnational tobacco companies which engaged in aggressive and highly sophisticated marketing campaigns, coupled with the creation of a domestic manufacturing presence and enhanced distribution systems that led to significant increases in the availability of cigarettes (Pomerleau et al., 2004; United States Department of Agriculture,

2013). At present, rates of male smoking in the former Soviet countries are commonly between 50% and 60%, according to one cross-national survey (Roberts et al., 2011), with poor and less educated men experiencing particularly high smoking rates and in turn incurring a high financial burden on household expenditure (Pomerleau et al., 2004; Bobak et al., 2006; Djibuti et al., 2007). The accumulated burden of tobacco-related disease among men under 75 years of age in the post-Soviet countries was the highest in the world (Ezzati & Lopez, 2003). Rates of smoking among women were traditionally low and much of the marketing effort of the transnational tobacco companies has been aimed at young women (Gilmore & McKee, 2004). As a result, smoking rates among Russian women doubled from 7% to 15% between 1992 and 2003 (Perlman et al., 2007). Similar rises were also reported in Ukraine (Andreeva & Krasovsky, 2007; Webb et al., 2007).

Recent evidence indicates that there may be a possible levelling off of smoking rates in the post-Soviet countries, with male smoking rates reaching a plateau or slightly declining over the 2000s (but still remaining at a very high level), particularly among younger men. However, poorer and less educated men have not benefited from such reductions (Roberts et al., 2011). No such recent declines were observed in women's smoking rates, with 2010 rates ranging from around 2% in Armenia to 16% in the Russian Federation, according to the above mentioned cross-national survey (Roberts et al., 2011).

These partial improvements may reflect an intensification of tobacco control measures over recent years, with all post-Soviet countries becoming parties to the WHO Framework Convention on Tobacco Control and implementing (to varying degrees) tobacco advertising restrictions, product warnings and labelling, smoking bans, awareness raising campaigns and some tax increases on tobacco products (WHO, 2011c). This contrasts with the Soviet era when tobacco control was essentially non-existent and with the 1990s when transnational tobacco companies actively prevented progress in tobacco control, for example ensuring that ineffective voluntary codes would be applied and tobacco excise rates would be cut (Danishevski & McKee, 2002; Gilmore & McKee, 2004; Pomerleau et al., 2004). However, challenges remain regarding the involvement of the tobacco industry in the framing of tobacco control measures (Danishevskiy & Saverskiy, 2009).

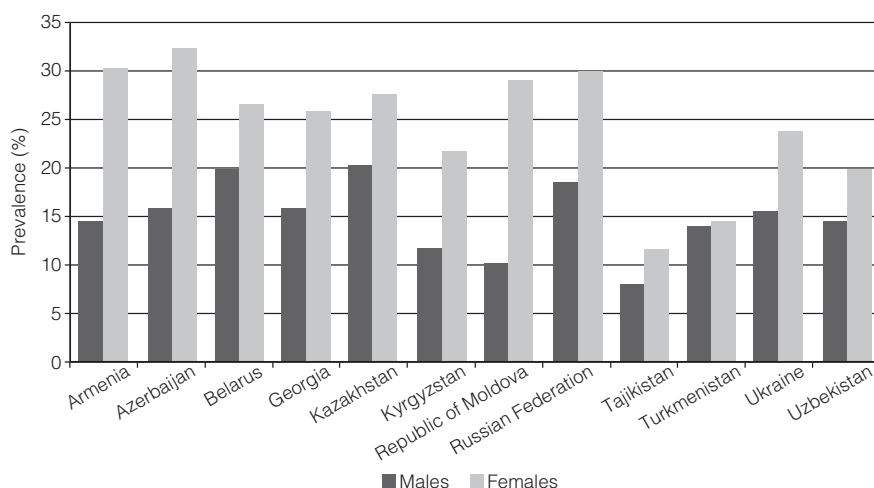
Recent improvements in tobacco control may also have contributed to the start of a change in social norms around smoking in some countries in the region, with evidence that the vast majority of the public want stronger tobacco control policies (Roberts et al., 2013). However, there are still large gaps in public understanding of the negative health effects of tobacco use – particularly among current smokers – that refute the argument that smokers know the risks

of their behaviour (Roberts et al., 2013). Additional challenges include the low price of tobacco products due to low tax levies, with 2010 prices (international dollars at purchasing power parity (PPP)) of a pack of 20 cigarettes of the most widely sold brands in the post-Soviet countries commonly around \$2, which compares to an average of around \$5 in EU member states (WHO, 2011c). Such challenges underscore the need for large-scale public awareness campaigns, including those drawing attention to the tactics employed by the tobacco industry, within comprehensive national tobacco control programmes.

Obesity, nutrition and physical activity

The available evidence suggests that rates of being overweight and obese are increasing in the region and are now comparable to countries in western Europe but not yet at the levels of the United States. While men are more likely to be overweight, women are more likely to be obese, which is in line with what is seen in other high and high-middle income countries (Huffman & Rizov, 2007; Sassi et al., 2009; Watson et al., 2013). In 2008, the highest prevalences of obesity among women – at around 30% – were seen in Azerbaijan, Armenia, the Russian Federation and the Republic of Moldova, while among men the highest rates – at around 20% – were in Kazakhstan, Belarus and the Russian Federation (Fig. 2.4). Projections suggest that further increases will take place, particularly among men (Huffman & Rizov, 2007; Rtveladze et al., 2012; WHO, 2014). The increasing trend in obesity has significant implications for diabetes and cardiovascular disease in the region and related health-care costs (Rtveladze et al., 2012).

Fig. 2.4 Prevalence of obesity in 2008, by gender and country (age-standardized)



Source: WHO, 2013.

Increasing education (in males) appears to be a strong predictor of obesity in the region and this could potentially reflect the shift from manual to knowledge-based economies in the post-Soviet countries and the more sedentary nature of occupations requiring higher level educational qualifications (Watson et al., 2013). Higher alcohol intake is also associated with obesity among men in the region, consistent with the experience in western Europe (Swinburn et al., 2011; Watson et al., 2013) but this association is particularly important in the post-Soviet countries given the traditionally high rates of male alcohol consumption (WHO, 2011a).

In addition to reductions in physical activity related to increasingly sedentary occupations, dietary factors play a role. The diet in the region has been characterized as high in meat and fat and low in fruit and vegetables (although this varies and is somewhat less the case in the countries of central Asia and the south Caucasus). While overall availability of fruit and vegetables has increased substantially in the region since the mid-1990s (FAO, 2013; WHO, 2014), there appear to be slight reductions in the daily consumption of fruit and vegetables in a number of countries, including Georgia, Kyrgyzstan and the Republic of Moldova. These reductions are greater among poorer economic groups (Abe et al., 2013). Simultaneously, there may be a shift towards western diets – with a high content of fat and sugar – in the region.

Water and sanitation

The huge housing construction programme in the Soviet Union starting in the 1950s increased access to essential services such as piped water (Morton, 1984). However, “Khrushchev’s slums” (*Khrushcheby* as these five-storey apartment blocks came to be known) and the buildings that followed them had many deficiencies with regard to the availability and quality of water supply. In addition, in many of the smaller towns and settlements water was still obtained from a pump (Morton, 1980), and over 60% of individual housing units in larger urban areas had no running water. Interruptions to water supply were also commonplace (Renaud, 1992). The situation was significantly worse in rural areas.

The economic crisis following the collapse of the Soviet Union reduced funds that could have been used to invest in basic infrastructure for water and sanitation (Davis & Whittington, 2004; OECD EAP Task Force, 2006). Surveys conducted in 2001 demonstrated that many people still lacked access to household water supplies, particularly in rural areas (McKee et al., 2006). There have been some improvements during the 2000s, with access to piped water in homes increasing in all countries, with the exception of Turkmenistan, Uzbekistan and Kazakhstan (Roberts et al., 2012; WHO/UNICEF, 2012).

However, access to piped water in homes still remains significantly lower in rural areas and among poorer people (Roberts et al., 2012). While there have been improvements in hygienic means of sewage disposal (except for slight declines in the Russian Federation), challenges remain in rural areas throughout the region (WHO/UNICEF, 2012).

Conclusion

After the major deterioration in health the post-Soviet countries experienced in the 1990s, there have been improvements in many health indicators through the 2000s. These include life expectancy, infant mortality, premature mortality and TB morbidity, with some improvements in risk behaviours such as hazardous alcohol consumption. Some alcohol and tobacco control policies have also been implemented in recent years in all countries, although to varying degrees and effectiveness. Despite these general improvements, major challenges for population health still remain, including low life expectancy compared to western European countries, large health disparities among different population groups, as well as alarming rates of MDR-TB.

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Chapter 3

Organization and governance

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Introduction

Since the collapse of the Soviet Union, some former Soviet countries have undergone enormous changes to the organization and governance of their health systems, while others have seen very little reform. The Soviet health system was governed in a top-down style from the central government in Moscow, which oversaw the 15 republican ministries of health, each of which operated according to strict norms and guidelines. Core functions of the health system in larger republics were carried out in three hierarchical administrative tiers: republican (national), regional (*oblast*) and district (*rayon*) or city, resulting in the duplication of responsibilities and overlapping population coverage. The situation was complicated further by the existence of parallel health systems in a number of ministries (such as the Ministry of Internal Affairs and the Ministry of Defence) and large state companies (such as Aeroflot and the Soviet railways).

Since independence, most health reforms have been characterized by some decentralization of responsibilities from the central to the regional or municipal (district or city) level and a reduction in the numbers of parallel systems. However, this has often served to complicate what was already an unclear division of responsibilities and weak coordination between different levels of government, with lower tiers unable to raise their own funds. In all post-Soviet states, the Ministry of Finance is the most powerful actor at the national level in determining the public budget ceilings of the health system, as it raises funds and allocates state budgets. As health is given low priority in government in most of the countries, funding for health tends to be low. Apart from developing national health policies and providing general guidance and regulations, ministries of health generally have limited direct management and

budgetary responsibilities, often restricted to management of a few national (republican) facilities, such as specialized hospitals.

In many countries, except Kyrgyzstan and the Republic of Moldova where health financing has changed to a single-payer system and *oblast* and *rayon* health departments were abolished, the fragmentation of authority among local (regional or municipal) governments and health insurance agencies has further weakened the capacity of ministries of health. The distribution of power among the different tiers of government reflects broader political considerations, with health ministries acting as passive bystanders, but in some countries there has been a tendency to retreat from the enthusiasm for decentralization in the 1990s, as central governments (or, more specifically, presidents) seek to reassert their authority. This process has been complemented by attempts to strengthen the capacity of ministries of health, such as through joint annual reviews and health summits in the Republic of Moldova, Kyrgyzstan and Tajikistan.

Key actors

Ministry of Health

Following the break-up of the Soviet Union, what had been the republican ministries of health assumed responsibility for developing and implementing national health policies (Ibraimova et al., 2011). However, ministries of health tend to be placed low in the hierarchy of ministries in most countries (with exceptions such as Belarus and the Republic of Moldova). Budgetary allocations are decided by the Ministry of Finance, which transfers money to the Ministry of Health to cover certain national programmes, including public health and specialized facilities, and to regions, which decide how to allocate the funds, albeit within guidelines issued by the Ministry of Health. Thus, health ministries have very little discretion; although they have responsibility for planning, regulation and direction of health authorities at the regional and municipal level, the extent to which they fulfil these roles varies and in many countries their responsibilities exist only on paper. Large-scale decentralization, as in the Russian Federation and Armenia, and privatization, in cases such as Georgia, further reduced the power of the Ministry of Health. As a consequence, many find that their roles are now limited mostly to the development of health policy and legislation.

Other ministries

The Ministry of Finance is one of the most influential actors in the health systems of post-Soviet countries, as it collects taxes, determines the allocation of funds to

the health system (including regional administrations) and monitors spending. The ministry also approves the volume of government health financing. Other ministries with a role in the health system include the Ministry of Education, which in many countries manages prevention measures among schoolchildren, and the Ministry of Labour and Social Affairs, or Ministry of Welfare, which is responsible for long-term care for people with disabilities and, in some cases, older people.

As noted above, in the Soviet Union a number of ministries (such as the Ministry of Internal Affairs or the Ministry of Defence) and large state companies (such as the railways or oil and gas industries) had parallel health systems for their employees and their families. Since 1991, several newly independent countries have tried to address this legacy. In Belarus, parallel health services have gradually been absorbed into the national health system, whereas in Armenia and Georgia parallel health facilities became autonomous private hospitals that can contract with the government or take fee-paying patients. In Ukraine and the central Asian countries, parallel health systems have remained largely unreformed. In Ukraine in 2012, parallel health systems accounted for 8.8% of all hospital beds and 7.5% of total government expenditure on health.

The penitentiary system is another important parallel health system. It usually falls under the authority of the Ministry of Internal Affairs and includes hospitals caring for prisoners with TB. Poor conditions in prisons, lack of prevention and treatment, and poor integration with mainstream health services are some of the problems that the penitentiary system faces in many countries of the region (Møller et al. 2005).

Local administrations

After independence, most countries initiated widespread decentralization (see the section Decentralization and Centralization). In many cases, the responsibility for administering and managing state-run health services was assigned to administrations at the regional or municipal level but these were relatively underdeveloped, lacking funds and managerial capacity. Local administrations tend to be responsible for administering and managing primary and secondary care services, while tertiary facilities tend to be managed at the national level, although there are also countries, such as Ukraine, with tertiary facilities at the regional level. However, there is often a lack of clarity over the roles of different levels of the system and responsibilities are often overlapping. Primary care, for example, may be the responsibility of municipal authorities but primary care facilities in regional centres may fall under the responsibility of regional authorities and, in the capital, of the national government.

In countries that retained the Soviet structure of health system governance, such as Azerbaijan and Ukraine, local administrations continue to carry out core health system functions but have limited autonomy and continue to act according to norms set by the Ministry of Health. In countries where local administrations raise and spend their own funds, they have more independence but this has not had the hoped-for effect of improved local responsiveness and accountability. In many post-Soviet countries there are pronounced inequities between regions and municipalities, with some sorely lacking funds, while local administrations can be easily affected by local interests. The inequalities are especially marked in countries with large, but localized, extractive industries, such as oil and gas, where those industries can spend large sums on local health facilities to attract and retain health workers. Additionally, while formally subordinated to the Ministry of Health, increased autonomy at the local level often meant that the ministry had little ability to implement national health reforms (see section below Challenges of decentralization).

Third-party payers

In 4 of the 12 post-Soviet countries discussed in this volume, patients, making private OOP payments, are the main purchasers of health services. In these countries, third-party payers (such as the government or social health insurance companies or statutory bodies) are responsible for a smaller proportion of total health expenditure, limiting their role in steering the health system (see Chapter 4). The contribution of formal voluntary health insurance to total health expenditure is small, accounting for less than 1% of expenditure and covering less than 1% of the population in most countries, Georgia being the notable exception.

In several countries, the Ministry of Health or, as in Armenia, an agency under the jurisdiction of the Ministry of Health, is the third-party payer. In Kyrgyzstan and the Republic of Moldova, reforms since 2000 have given purchasing responsibility to a single national insurance fund. In the Republic of Moldova the health insurance fund is governed by an Administrative Council of 15 members, including representatives of parliament, the President's Office, government ministries (including health, finance and the economy), the National Confederation of Employers, trade unions, the medical profession and patient organizations. In countries with national insurance funds, they are intended to act as strategic purchasers of health services, by entering into selective contracts with providers. However, this is rarely the case in practice, given their frequent subordination to the Ministry of Health, the substantial veto power of hospital directors, and the overall limited leverage in the face of widespread OOP payments.

The Russian Federation has multiple third-party payers in the form of private insurance companies but the extent to which there is competition between them varies by region. Russian insurance companies undertake little or no strategic purchasing and serve mainly to process bills (Fuenzalida-Puelma et al., 2010).

Private sector

The private sector still plays a limited role in the health systems of most post-Soviet countries, except in some major cities. This reflects the very limited potential to obtain a reasonable return on investment in settings where health expenditure is low, except by entering niche markets, such as the treatment of foreigners and the very rich in capital or major cities, or dental care, diagnostic clinics and pharmacies, where profits are made from the accompanying retail trade. This situation persists despite the political goal of increasing privatization of public facilities in many countries following independence. Private practice, whereby doctors establish themselves in single-handed or group practices, has been uncommon despite new legislation permitting private practice in most countries (Afford & Lessof, 2006). Hospital privatization has been very limited in most countries, with the exception of Georgia where almost the entire public hospital stock was sold to private investors. Insurance companies now own more than 40% of all hospitals in Georgia, while 30% are owned by individuals and 20% by other types of enterprise, although there is often a lack of information and clarity about the identity and background of the owners (Transparency International, 2012).

Professional organizations

During the Soviet period, various professional associations existed but with little or no real independence; the medical profession was 'deprofessionalized' and was never able to lobby for professional standards or the interests of its members (Popovich et al., 2011). Since then, a number of independent professional organizations has emerged, often duplicating or competing with each other. In most countries, trade unions in the health sector offer little protection to health professionals. This is a particular problem in the private sector, where employment rights have been frequently undermined. Professional associations also have little impact on health policy and planning, although they may contribute through participation in consultative bodies. An exception is Kyrgyzstan, where professional organizations such as the Association of Family Group Practices and the Hospital Association have worked closely with the Ministry of Health on health sector reform (Ibraimova et al., 2011).

International agencies

International agencies, such as the World Bank, WHO, the Global Fund to Fight AIDS, Tuberculosis and Malaria and bilateral donors, have played a significant role in health reforms and the delivery of specific programmes in most former Soviet countries. They contribute a significant proportion of total health expenditure in countries such as Armenia, Kyrgyzstan, the Republic of Moldova and Tajikistan (Rechel et al., 2012) and successful health reforms in Kyrgyzstan and the Republic of Moldova relied on the collaboration of international development partners (Ibraimova et al., 2011). In other countries, such as Belarus, the Russian Federation and Turkmenistan, there are few international partners, but United Nations (UN) agencies are present and work with state structures on disease-specific projects (Richardson et al., 2013).

The involvement of international agencies can pose challenges for donor coordination and Kyrgyzstan is the only country so far to have formally adopted a sector-wide approach (SWAp) to avoid fragmentation of aid, although the Republic of Moldova also has many elements of SWAp in place, including a Sectoral Coordination Council, a common strategic framework and publication of a yearly report mapping official development assistance. In Tajikistan, where attempts to implement a SWAp have faced major obstacles (Mirzoev, Green & Newell, 2010), it was concluded that the actions of international agencies had weakened domestic health governance and delayed health system reform, while competition for staff undermined the capacity of the Ministry of Health (Rechel & Khodjamurodov, 2010). Those countries reliant on international agencies and their funding are also at risk if support is withdrawn, particularly if the availability of international assistance distracts from the need for local capacity-building.

Civil society

The communist system provided little opportunity for the emergence of civil society (Figueras et al., 2004). Domestic NGOs are often less active than international ones and have very little influence on health policy. Again Kyrgyzstan is an exception; in recent years several Ministry of Health functions have been delegated to NGOs (Ibraimova et al., 2011). The Republic of Moldova also has strong local networks of NGOs in areas such as HIV/AIDS, TB, tobacco and alcohol control, which play an increasing role in health policy development.

Patient organizations did not exist in the Soviet era and though they have emerged in some countries since 1991, they have little influence on health policy. In the Russian Federation, patient associations are mostly disease specific

and are becoming more prominent and vocal in protecting the interests of their members but have yet to gain official support (Popovich et al., 2011). As in western Europe, many such groups receive substantial financial support from pharmaceutical companies and often represent their interests rather than those of patients.

Decentralization and centralization

During the Soviet era the health system was centrally planned and managed through a hierarchical structure, split into several levels of government administration serving overlapping populations. Republican ministries of health administered policies that were decided in Moscow and reported on the performance of the system against strict, centrally determined targets (Chanturidze et al., 2009). Following independence, many central governments faced fiscal collapse and decided to decentralize the task of financing health services.

In some countries, there was therefore a political imperative to decentralize power to regions (although in others with more autocratic governments, power was, if anything, further consolidated within the office of the president). Where administrative and financial decentralization did take place, it had consequences for health systems, although this was almost always incidental to the wider political process. Decentralization was typically a chaotic process, with confusion over responsibilities at different levels of government. The simultaneous process of privatization in some countries such as the Russian Federation further complicated matters and reduced stability (Danishevski et al., 2006). Some countries, including Armenia, Georgia and Uzbekistan, decentralized their health systems more gradually (Rechel et al., 2013), while the health system in Azerbaijan (where no regional tier of government exists between the national and municipal level) has retained its centralized Soviet structure, with strict line-item budgets imposed by the Ministry of Finance on local authorities who own and finance most providers (Ibrahimov et al., 2010). Belarus has also retained a centralized, hierarchical structure.

Forms of decentralization

Decentralization can take the form of devolution (passing responsibility to local governments), deconcentration (passing authority to local offices of central government), delegation (passing responsibility to local offices or organizations outside of government) and privatization (transfer of ownership to private bodies) (Rondinelli, McCullough & Johnson, 1989). In the post-Soviet countries, devolution of administrative responsibility to regional or

municipal governments was the main form of decentralization. Administrations at the regional and municipal level became responsible for managing their own medical facilities, although tertiary care tended to remain under the Ministry of Health (except in those countries with tertiary care managed at the regional level), as did responsibility for setting prices and defining coverage. In countries such as Uzbekistan, power was effectively retained by the Ministry of Health as there were strict central guidelines and the structures in place locally were inadequate to coordinate health sector activities. In other countries, such as the Russian Federation, the rapidity of decentralization meant that the Ministry of Health effectively lost control over the health system. Power was also devolved to newly established bodies, such as regional health authorities in Georgia, established in 1995 and given the task of identifying local health needs and developing strategies to meet them and to coordination commissions in Kyrgyzstan, which became responsible for implementing national health reforms and programmes, as well as health promotion and protection.

Devolution of financial responsibility was a feature of decentralization in some countries, where regions – and, in Kazakhstan, municipalities – were expected to collect funds locally and determine local health budgets. In many countries, health facilities were also granted new responsibilities; financial responsibility was passed to facility level in Armenia and hospitals and polyclinics are, in theory, able to retain and reinvest profits as they see fit, though the extent to which they can use this power, in practice, is limited. The 2009 *Concept on the Unified National Health Care System of Kazakhstan* also envisages increasing the autonomy of health-care providers by changing state institutions into state enterprises that have financial autonomy and are allowed to charge fees for services (Katsaga et al., 2012). In contrast, hospitals in Tajikistan and Belarus, and all health facilities in Azerbaijan and Ukraine (except in pilot regions) continue to be tied to strict line-item budgeting and have little decision-making power in relation to official funds (although of course they can use the extensive direct payments as they wish). In the Republic of Moldova, both hospitals and primary health-care providers have been granted a certain degree of autonomy since 2003 and both can enter into direct contracts with the National Health Insurance Company.

In some countries, decentralization has been achieved through deconcentration of administrative authority. Regional governments have taken on new responsibilities in Belarus and Ukraine but their autonomy is limited and they are functionally subordinate to the Ministry of Health. Similarly, in Uzbekistan administrative functions have been delegated to regional (*viloyat*) health administrations but centralized decision-making has been retained at national level, with a strict vertical structure and tight national guidelines and norms

(Asadov & Aripov, 2009). This has created problems where highly centralized decision-making prevented regional administrations from implementing local projects. The implementation of UNICEF recommendations for respiratory infection and diarrhoea in children, for example, was impeded because they contradicted outdated national regulations (Asadov & Aripov, 2009).

Delegation has also been a significant form of decentralization in the region, particularly in the Russian Federation where Mandatory Health Insurance Funds were established with the stated objective of introducing competitive market forces into the health system, although they have since been placed under the jurisdiction of the Ministry of Health and Social Development. Delegation has also been a feature of health reform in Kyrgyzstan, with functions of the Ministry of Health, such as accreditation of health facilities and monitoring quality of care, being transferred to NGOs, such as the Medical Accreditation Commission, the Association of Family Groups Practices and the Hospital Association.

Challenges of decentralization

While the degree of authority devolved or delegated to regions or municipalities has varied considerably among countries, there has been no coherent strategy to increase local managerial competence or to address resource shortfalls (Afford & Lessof, 2006). Despite initial widespread enthusiasm for decentralization, it did not have the desired effects in most countries and problems emerged, including blurred lines of responsibility, lack of local capacity and increased funding inequities between regions (Rechel et al., 2013).

The lines of accountability between different levels of the health system have often become blurred, resulting in poor coordination and tensions. In the Russian Federation, these often reflect political tensions between regional governors and mayors of regional capitals, and municipal authorities have been known deliberately to choose policies simply because they were opposed to regional policies (Saltman, Bankauskaite & Vrangbæk, 2006). Decentralization has also been problematic where the Ministry of Health was left accountable for implementation but lacked the regulatory authority to drive reforms forward. In addition, local governments often hold a weaker position than the central government, making reforms more difficult. An example is hospital rationalization. Hospital managers hold greater influence over local politicians as they tend to be major regional employers. Where responsibility for hospitals has been devolved from central to local government, restructuring has therefore been more difficult politically (Smith & Nguyen, 2013). In some countries, including Ukraine and the Russian Federation, decentralization of responsibilities and the introduction of private insurance bodies resulted

in overlapping, discordant governance structures so that local facilities and councils face divergent incentives and a division of accountability (Sheaff, 2005; Lekhan, Rudy & Richardson, 2010).

The limited capacity of regional and municipal authorities and the absence of a culture of self-governance was another barrier to successful reform (Saltman, Bankauskaite & Vrangbæk, 2007). Lower administrative levels were not always ready to run a complex network and without effective capacity building, or any alternative resource allocation model, many continued to rely on old management approaches that did not meet the requirements of the new environment (Hakobyan et al., 2006). Variation in capacity has contributed to inequities between regions. Some richer Russian regions, such as Samara, Kemerovo and Moscow, implemented innovative health system reforms, including new health financing models, which enabled them to use available resources more efficiently, while most other Russian regions suffered from highly fragmented financing systems (Saltman, Bankauskaite & Vrangbæk, 2007).

The devolution of financial responsibility from central to local governments also resulted in major funding inequities between regions as the wealth of regions and their ability to collect taxes varied enormously. Rapid decentralization in the Russian Federation is thought to have contributed to the increasing inequalities in the 1990s (Saltman, Bankauskaite & Vrangbæk, 2007), though redistribution mechanisms have now been put in place to address variation in per capita health funding between regions (Popovich et al., 2011). Decentralization also exacerbated the indebtedness of local authorities and institutions, contributing to the late payment of wages (Afford & Lessof, 2006). In Ukraine, public expenditure for health care became a heavy burden on local budgets and a number of communities struggled to maintain existing levels of health services. In 2002, inter-budget transfers were established that have approximated budgets among regions. Funds are transferred between regions based on a specific formula that takes account of the number of residents and an index of relative fiscal solvency (Lekhan, Rudy & Richardson, 2010). However, local governments have often been reluctant to allow the revenues they collect to be redistributed (Figueras et al., 2004).

A final challenge is the widespread corruption in the health sectors in many of these countries, as described in detail in the 2006 Global Corruption Report by Transparency International (Transparency International, 2006).

Recentralization

As a result of funding inequities across regions and the loss of central control by health ministries, many reforms over the past two decades have sought to

recentralize health systems. The national pooling of funds in the Republic of Moldova and Kyrgyzstan – reversing previous reforms that pooled them at district/*oblast* level – led to a more equitable resource allocation in both countries (Rechel et al., 2013). In Armenia, concerns that village authorities were given too much power when handed responsibility for rural outpatient clinics led the government to reverse this decentralization process (Richardson, 2013). Reforms in Kazakhstan have increasingly recentralized administration and financing functions and have given the Ministry of Health greater authority. Reasons behind this development include considerable variation in regional funding levels and payment systems and a number of public health emergencies that revealed governance problems at the regional level (Katsaga et al., 2012). The Russian Federation has also undergone successive waves of recentralization since 2000, the most recent of which envisages the full centralization of mandatory health insurance funds and administration (Rechel et al., 2013). However, given the degree of decentralization in some countries, it is sometimes hard for the central government to re-establish control.

Privatization

Decentralization has also been achieved to some extent through privatization, including legislative changes allowing private practice, and the transfer or sale of government facilities to private investors. In most countries the privatization of health facilities was limited to dental care, pharmacies and manufacturers of medicines and medical equipment. In some countries, such as Ukraine, privatization was minimal because the constitution prohibits reducing the network of public health facilities and the private sector has instead developed through the establishment of new facilities (Lekhan, Rudiya & Richardson, 2010).

The major exception in the region is Georgia, where the government rapidly privatized almost the entire hospital sector in the years after independence (Transparency International, 2012). In this country, there has tended to be vertical integration of ownership within the private sector so that pharmaceutical companies often own insurance companies and hospitals. This has led to a situation where the majority of medicines prescribed in some hospitals are provided by the pharmaceutical company owning the hospital, a problem further exacerbated by the fact that clinical guidelines are also being developed by the pharmaceutical industry (Transparency International, 2012). This results in an obvious conflict of interests and there is no incentive to increase efficiency and affordability of health services. Prices are rapidly increasing, especially for uninsured patients who are charged a higher price in insurance company-owned hospitals than those patients insured by the insurance company (Transparency

International, 2012). As tenders only require investors to maintain the hospital's profile for seven years – and most hospitals in Georgia are small and usually unprofitable – there is a risk that many services will disappear given the more lucrative uses for the land they occupy.

More generally, there is often poor regulatory oversight of private health facilities (see section Regulation), which puts the accessibility and quality of services at risk. In Georgia, the only quality assurance mechanism is the complaints service, which has insufficient powers and capacity to enforce redress against a company that has violated patient rights. After a change in government in 2012, however Georgia has stepped up attempts to strengthen regulation and oversight and to move to a system of universal health coverage. In Uzbekistan, the inadequate oversight of private providers has led to unsafe and substandard care, so the government has responded by significantly limiting the types of services that can be provided in the private sector.

Regulation

The key regulator in most countries in the region is the Ministry of Health, or statutory bodies subordinated to the ministry. In many countries, regulation follows a hierarchical top-down model, whereby the ministry issues standards and norms that have to be followed by health facilities and facility administrators monitor implementation and report results back to the ministry. Where significant decentralization has taken place, responsibility for regulation and monitoring standards is often shared among multiple actors. This can fragment monitoring of health service quality, particularly when there is no systematic mechanism for reporting results from local to national level (Turcanu et al., 2012).

Regulation has become particularly important where reforms such as a purchaser–provider split, increased autonomy for providers and development of the private sector have been introduced. Some countries have risen to this challenge. The Republic of Moldova has sought to ensure that the National Health Insurance Company pursues equitable resource allocation, with pooling of funds from the state budget and contributions from employers and employees (Turcanu et al., 2012). Other countries have introduced reforms without the necessary regulation, leaving the population unprotected from vested interests and perverse incentives. Deregulation was a key element of health sector reform in Georgia between 2003 and 2012, when it was left to market mechanisms to regulate relations between patients, providers and purchasers. The shift to private health insurance was not accompanied by corresponding regulation as it was thought that any regulatory mechanisms required would somehow

later emerge from a competitive marketplace (Hauschild & Berkhout, 2009). As a result, there were severe gaps in the regulatory capacity of Georgia's health system, which the market had no incentive to fill as there was no profit involved. Supervision of the private health insurance market was performed by an agency that, prior to the 2007 reforms, monitored all types of private insurance and was ill-equipped to deal with the specificities of health insurance (Chanturidze et al., 2009). However, as mentioned above, since a change of government in 2012, Georgia has once again aimed to strengthen state involvement and regulatory capacity. In the Russian Federation, too, reliance on market mechanisms without adequate state regulation was a feature of early Mandatory Health Insurance reforms. Weak regulatory control of insurance companies, without clear distinctions between mandatory and voluntary health insurance, or public and private finance, created opportunities for exploitation of uninformed consumers and manipulation of the publicly funded benefit package (Chernichovsky & Potapchik, 1997).

Most countries have revised or redeveloped medical standards or clinical protocols. In Belarus, for example, the Advisory Council on Clinical Protocols in the Ministry of Health develops and updates clinical protocols, and patient records are audited to check that protocols have been followed. The requirement for doctors to keep detailed notes on procedures adds a significant burden to their workload at the cost of doctor–patient consultation time and doctors who fail to follow protocols face severe legal consequences (Richardson et al., 2013).

Ministries of health are also responsible for regulating and (sometimes) licensing facilities, in some countries, such as Armenia, Belarus and the Republic of Moldova, regardless of ownership. In Azerbaijan, the Ministry licenses private facilities but has limited power to regulate them and there is no licensing of public facilities. In Uzbekistan, the government initially limited the ability of health authorities to regulate private facilities, in order to encourage the growth of the private sector, while the public sector is heavily regulated by government agencies. In many countries of the former Soviet Union, individual health workers are only expected to demonstrate their qualifications when they begin employment at a health facility. Where the licensing and accreditation of facilities or health workers exists, it tends to be more of a formality than a tool for improving the quality of services (Lekhan, Rudyi & Richardson, 2010). Health workers are subject to rules that regulate how often they need to upgrade their knowledge and practical skills throughout their career, and how often they need to undergo appraisal (see Chapter 5). The regulation and governance of pharmaceuticals are the responsibility of agencies and departments under the Ministry of Health (see Chapter 9).

Health information management

In the Soviet era, information on curative services and health conditions was routinely collected but rarely used (Figueras et al., 2004). After 1991, it became apparent that health information was inadequate for the changing needs of planners and often of poor quality. In many post-Soviet countries, health information systems face the challenge of moving away from measures of inputs to performance indicators which can be used to improve health system performance and management (Chanturidze et al., 2009).

Data tend to be collected by regional units, coordinated by a national body. A common problem with health information management is the number of bodies and agencies involved in collecting and collating data, resulting in multiple overlapping data collection systems using different methods (Khodjamurodov & Rechel, 2010). The existence of fragmented health information systems is a characteristic inherited from the Soviet period, which has been exacerbated by decentralization in some countries. In Uzbekistan, five major data collection mechanisms exist, including the Ministry of Health, the sanitary-epidemiological service, national programmes, parallel health systems and state statistics, all functioning independently (Ahmedov et al., 2007). An added complication is data reporting within donor-funded projects, which is rarely integrated within national reporting structures (Ancker et al., 2013). This fragmentation of data collection mechanisms causes problems across the region, as useful information from different parts of the system is not shared and data from different sources are not linked (Ibrahimov et al., 2010; Turcanu et al., 2012). Health information systems were further affected by decentralization as local health staff lacked the capacity and resources to carry out surveillance functions (Hotchkiss et al., 2006) and the Ministry of Health lost control. In Georgia, privatization was pursued with the hope that health management information systems would emerge over time; collection of data for health indicators depends on the goodwill of providers to submit accurate records to the government, as reporting is not enforced (Chanturidze et al., 2009). Although information systems have now been developed in Georgia, they relate more to financial matters than health issues, owing to the incentives facing the industry.

At the facility level, reporting forms are often numerous and burdensome, due to the existence of multiple data collection systems. However, the quality of reporting is rarely verified by an independent body. Quality assurance programmes do exist in Belarus to ensure notes are sufficiently detailed and treatment protocols have been adhered to, but, as noted above, the pressure to produce detailed notes comes at a cost of time for doctor–patient consultation (Richardson et al., 2008). Lack of staff training and resources is another

serious problem for data collection systems. Where providers continue to be paid according to line-item budgets, this payment method does not provide incentives to collect and analyse data for better planning, as providers do not directly benefit from improvements (Ibrahimov et al., 2010).

An additional limitation of health information systems is the lack of data from the private sector in some countries. This is most problematic in Georgia where almost all health facilities are private but also in countries where the private sector has recently expanded. Often, no data collection on private sector activity is carried out and private facilities are not captured in government databases, as was noted in Uzbekistan (Ahmedov et al., 2007). This is also a problem for dental care throughout the region.

Overall, health information systems have a limited ability to meet the needs of policy-makers. Where data collection is fragmented and carried out by multiple agencies, an excess of overlapping data is generated. Few reporting systems are yet computerized – particularly in the poorer post-Soviet countries – and institutions lack the capacity and the means to transform data into relevant information on health trends and provider performance to inform decision-making (Health Metrics Network, 2007). In addition, data tend to be focused on inputs, reflecting the input-driven nature of health systems, which do not facilitate assessment of health system performance (see Chapter 11). Few countries of the region have adopted measurable and time-bound health targets in national health strategies (Glonti & Rechel, 2013).

Yet there are ongoing attempts in the region to reform health information systems. In some countries, software has been developed to improve data collection, processing and analysis, and regional centres of medical statistics and information have been equipped with computers (Khodjamurodov & Rechel, 2010). Development of functional information systems for specific diseases and medications has been supported by international organizations in countries such as the Republic of Moldova, using international methods to calculate the disease burden and other health indicators (Turcanu et al., 2012). In Kyrgyzstan, the many inherited health information systems have been transformed into a unified system and several countries have developed national strategies to achieve unified health information systems and improve the reliability of data, including through the use of electronic patient records. However, unified health information systems require significant investment, and implementation has been limited where there was a lack of material and financial resources (Turcanu et al., 2012).

Population involvement

Patient rights

During the Soviet era the concept of patient rights was, in practice, not recognized and, following independence, patient empowerment was not high on the reform agenda in most countries. Since then, a number of countries have adopted legislation and published patient charters but while there may be extensive rights on paper, the ability to exercise these rights is severely constrained by the absence of effective mechanisms to ensure implementation. Legislation on patient rights includes issues such as access to care, waiting times, patient choice, pricing of services, reimbursement and complaints procedures but without legal or financial sanctions, these are merely formal statements of principle without real consequence. Studies in several countries of the region have uncovered a lack of awareness on patient rights, both on the part of patients and physicians (Fotaki, 2006; Manjavidze, Beriashvili & Zarnadze, 2009).

Few countries have a specific body responsible for protecting patient rights or responding to complaints and most often the role is split between several bodies, so that no single actor is held accountable and bodies lack the authority to adequately protect patient rights. Complaints procedures are the main mechanism by which violations of patient rights can be addressed, which is not sufficient for ensuring quality of care. Furthermore, although the number of complaints is growing in some countries, complaints are often not adequately addressed. Patients in most countries have the right to take legal action against providers or insurers but legal actions are rare and it is difficult to seek compensation for low-quality or unsafe health care. Where measures are taken in response to health-care related harm, their often strictly punitive nature creates a culture where mistakes cannot be admitted and may be covered up. In Tajikistan, for example, health-care providers – when found to have caused health-care related harm – are obliged to provide the full course of treatment at their own expense (Khodjamurodov & Rechel, 2010), while in Belarus doctors face harsh penalties for actions leading to adverse events (Richardson et al., 2013).

Citizens usually have the formal right to access information about their health and the services available to them but the mechanisms for accessing such information are often unclear, and data to inform patients on the quality, type, cost or characteristics of services often do not exist or are not publicly available. In addition, a paternalistic doctor–patient culture remains in place in most countries so that patients are not accustomed to participating in decisions about their health and treatment.

Patient choice

Increasing patient choice was a common component of reform and legislation has generally allowed consumers to select providers of primary health care (see Chapter 7). Patient choice may also be exercised through self-referral, as people tend to bypass gatekeepers in primary care and pay OOP for secondary care, although this is regressive and inefficient for the system. Patient choice tends to be limited by affordability and geographic proximity, particularly in rural areas. Furthermore, as mentioned above, public dissemination of information on provider performance and quality of care is still limited, making an informed choice by patients difficult. Switching providers is rare and, in most countries, patients remain effectively assigned to a provider according to their place of residence. However, informal networks and word of mouth can also influence provider choice (Ahmedov et al., 2007; Manning & Tikhonova, 2009).

In Georgia, reforms in 2008 gave patients the choice of multiple competing insurance companies but this was reversed in 2010 by measures that allowed only one insurance company per region, diminishing choice and competition but avoiding problems of adverse selection and cream skimming. In the Russian Federation, patients in some regions are able to choose their insurance company but there is little willingness to switch companies and this decision is mostly made by employers rather than employees (Fotaki, 2006).

Patient satisfaction

Patient satisfaction was not valued highly during the Soviet era (Harutyunyan et al., 2010) and patient satisfaction surveys are still not common practice in post-Soviet health systems. However, a number of studies exploring patient satisfaction have been carried out. In the Russian Federation, satisfaction has varied considerably over time. High levels of dissatisfaction were observed in the early years of transition (Rusnova & Brown, 1997), slight improvements were noted following the introduction of the Mandatory Health Insurance scheme (Fotaki, 2006) but, more recently, patient satisfaction has again declined, which has been attributed to high prices of pharmaceuticals, long waiting lists and the perceived low skills of doctors (Popovich et al., 2011). Surveys in Ukraine have also found the population to be highly critical of the health system, mostly due to the high costs for medications (Lekhan, Rudy & Richardson, 2010). In Armenia, in contrast, high levels of satisfaction with primary care services have been reported despite their poor quality, which was attributed to low expectations, a reluctance to criticize services that are under strain and the fear that providers will face punitive measures, as was often the case when similar information was collected during the Soviet era (Harutyunyan et al. 2010).

Satisfaction was higher among those in rural areas and respondents with lower levels of education, which is thought to reflect the very low expectations among these groups.

Satisfaction with the health system as a whole in nine former Soviet countries has also been measured by two linked surveys, conducted in 2001 and 2010, finding a significant increase in satisfaction in most countries, although it declined slightly in Belarus, Kyrgyzstan and the Russian Federation (Footman et al., 2013). However, satisfaction with the health system was generally low, with only a slight majority of respondents satisfied in Armenia, Azerbaijan, Belarus and Kazakhstan and the vast majority dissatisfied in the Republic of Moldova, the Russian Federation and Ukraine.

Population involvement

In the Soviet Union there was no public participation in the running and planning of the health system but, more recently, citizen empowerment and participation have become common declarative features of reform programmes (Figueras et al., 2004). Again, reality does not match rhetoric and in most post-Soviet countries the public are not formally represented in decision-making or policy-making bodies. For example, in the Republic of Moldova internal rules to ensure transparency in the decision-making process were developed but even now very few decisions are open to public consultation and even fewer take recommendations of public associations into consideration (Turcanu et al., 2012). Barriers to greater public participation include resource constraints, cultural blocks and professional resistance in linking with the community (Figueras et al., 2004).

Limited public involvement in policy-making illustrates the major challenges facing those seeking to promote transparency and accountability in health systems. Some mechanisms to involve communities in the organization of local health systems have been piloted (Khodjamurodov & Rechel, 2010) but are yet to be rolled out nationally. Where the general public has had increased involvement, such as in Kyrgyzstan, this has contributed to the success of reform, while public involvement has been clearly missing in reform attempts that failed (Rechel et al., 2012).

Conclusion

Following independence, the organization and governance of most former Soviet health systems underwent a series of reforms, in some countries as a consequence of political moves to decentralize the structure of government.

Devolution of power to local administrations that lacked capacity and resources has posed a serious challenge to health system governance and undermined equity in health financing across regions or municipalities. The role of the Ministry of Health, already weak due to its low priority in government, has also been further weakened by decentralization. As a result, key responsibilities of the health system, such as regulation and health information management, have often been fragmented among multiple actors and it has been unclear who is accountable. Some countries have undergone recentralization of their health systems or are in the process of doing so. These reforms have proved successful when accompanied by a commitment to ensuring equitable access to health services, effective regulation and clear engagement by the Ministry of Health in its stewardship role.

Despite the formal aim in many countries of making health systems more open and democratic, population involvement in the running of health systems is still minimal and patient rights exist mainly on paper. Health information systems tend to remain tied to input-based indicators that do not inform evidence-based policy-making, and, without adequate investment, information systems continue to be fragmented and provide low-quality data, although efforts to unify health information systems are now under way in several countries of the region.

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Chapter 4

Health financing

Erica Richardson

Introduction

At independence, the countries of the former Soviet Union inherited extensive health systems that had been chronically underfunded. Health financing mechanisms were in line with the Soviet administrative command economy but were ill-equipped to deal adequately with the challenges of the post-Soviet era. Health systems are an integral part of the economies in which they are embedded and, as such, problems that affect the wider economy, such as informal economic activities, lack of transparency or weak regulation, will also affect health system financing. The common heritage and continuing similarities in many of the issues faced by the post-Soviet countries mean that the financing systems had very similar strengths and weaknesses but policy choices have necessarily been shaped by widely diverging internal and external circumstances and countries have chosen to follow different courses (Rechel et al., 2013). Reflecting on these policy choices and their wider socio economic environment from a comparative perspective offers a means to exploring the range of factors that can improve or undermine equity in health financing (Kutzin et al., 2010a).

This chapter uses a functional approach to health financing, exploring the broad trends in overall expenditure levels, main sources of revenue and the coverage of statutory financing mechanisms. The main source of data is the National Health Accounts series – a validated dataset that uses a unified methodology for all countries covered and represents the best available data for comparative purposes (WHO, 2014a). However, it is important to stress that this data series can underestimate OOP expenditure in countries that do not routinely conduct detailed household budget surveys or where surveys are patchy and irregular (Kutzin & Jakab, 2010).

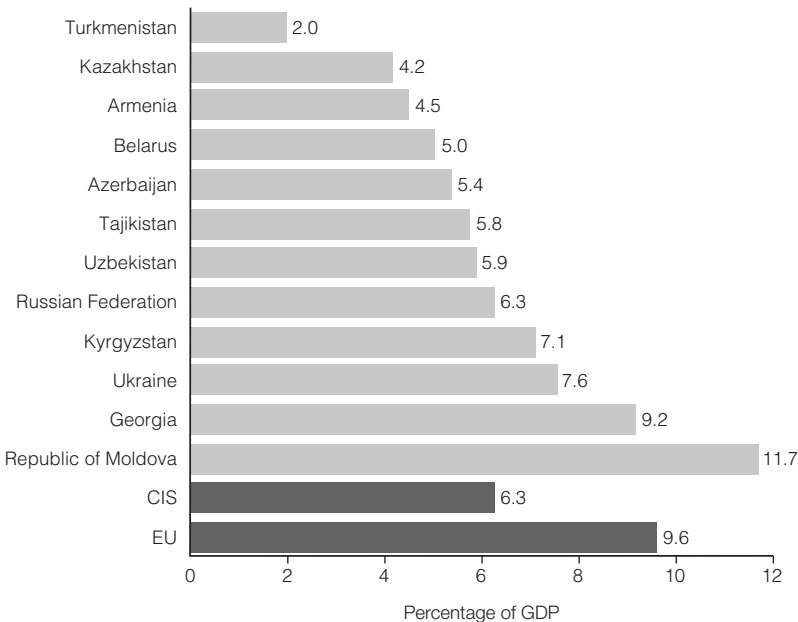
Expenditure

Total health expenditure as a proportion of GDP in the 12 former Soviet countries considered in this volume ranges from some of the highest levels in the WHO European Region (Republic of Moldova) to some of the lowest (Armenia, Kazakhstan, Turkmenistan), although on average total health expenditure is quite low compared to the levels seen in the European Union (EU) (see Fig. 4.1).

Whereas the countries of western Europe have largely followed a steady upward trend, with total health expenditure as a proportion of GDP increasing over time, no single trend can be discerned across the post-Soviet countries. Between 1995 and 2012, health expenditure as a proportion of GDP has increased most rapidly in Georgia, the Republic of Moldova and Tajikistan; it has increased slightly or remained stable in Kyrgyzstan, the Russian Federation and Ukraine but has fallen in Armenia, Azerbaijan, Belarus, Kazakhstan, Turkmenistan and Uzbekistan (WHO, 2014b). Throughout the 1990s, the fiscal space across the former Soviet countries was much reduced as a result of economic crises and low economic productivity, resulting in cuts to health spending (Kutzin & Jakab, 2010). However, a lack of political will also played a major role and one of the most enduring post-Soviet legacies has been the relatively low political priority afforded to health in most post-Soviet countries.

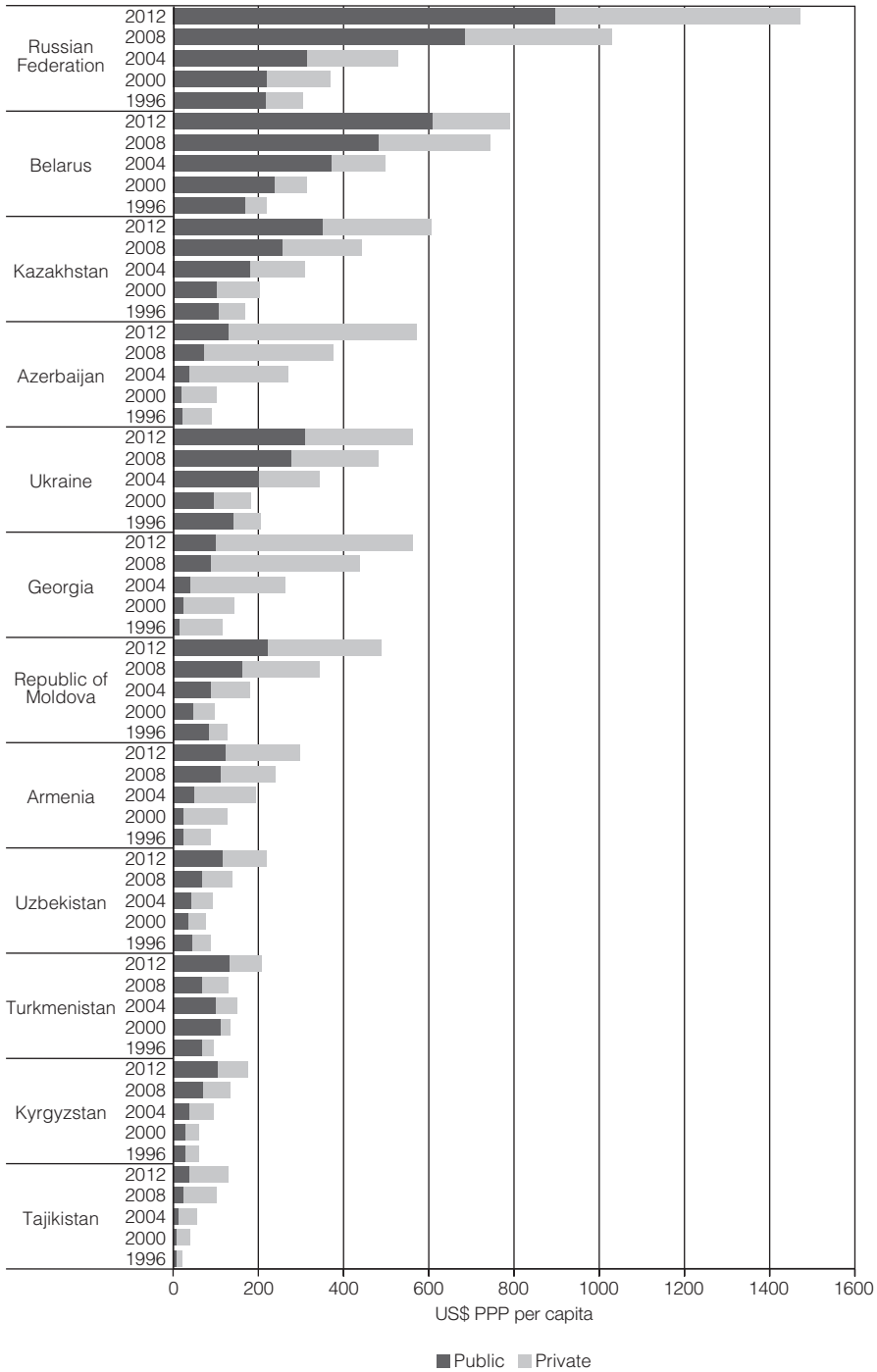
Measured in purchasing power parity (PPP), total health expenditure per capita is low in almost all of the former Soviet countries (Fig. 4.2). Nevertheless, in

Fig. 4.1 Total health expenditure as % of GDP, WHO estimates, 2012



Source: WHO, 2014b.

Fig. 4.2 Total health expenditure in US\$ PPP per capita from private and public sources, WHO estimates, 1996–2012 (selected years)



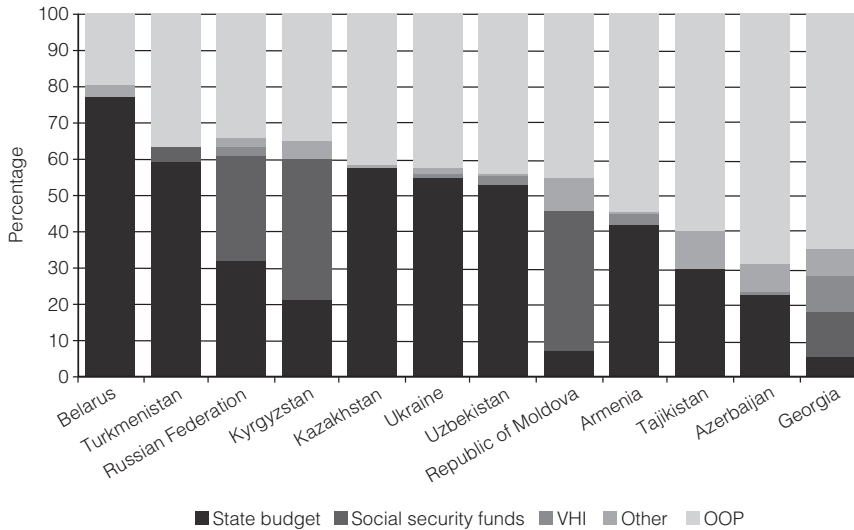
Source: WHO, 2014a.

all countries per capita expenditure has increased steadily since the mid-1990s. The increase was most pronounced in those countries with the highest GDP per capita (the Russian Federation, Belarus, Kazakhstan, Azerbaijan), with the exception of Turkmenistan where, despite its increasing affluence since the late 1990s, total health expenditure per capita has remained among the lowest in the region. This is potentially due to the underestimation of OOP payments in this country (Rechel, Sikorskaya & McKee, 2009; WHO, 2014a). While the relative wealth of countries is thus reflected in their per capita health expenditure, some variation between countries is the result of policy choices. In countries in which overall government spending is higher, health spending is also higher; yet, the level of overall government spending does not always follow higher GDP. Similarly, while contracting GDP levels following independence led to a cut in health spending in all former Soviet countries, subsequent fiscal expansion has not automatically led to greater public sector health spending (Kutzin & Jakab, 2010). In Azerbaijan and Georgia, for example, per capita spending on health is relatively high for the region, but the government share of expenditure is nevertheless low (Fig. 4.2).

Sources of revenue

The share of public sector health expenditure as a proportion of total health expenditure is relatively low compared to the WHO European Region as a whole; indeed, in 5 of the 12 countries it was below 50% of total health expenditure in 2012 (Fig. 4.3). Overall, since 2000 few countries have drastically changed their position relative to each other and there has been little convergence (Fig. 4.2). Belarus and the Russian Federation have consistently had a larger proportion of total health expenditure from public sources, while Georgia, Azerbaijan and Tajikistan have consistently had the lowest proportion. Armenia and Kyrgyzstan are the only countries to increase substantially the proportion of total health spending from public sources, albeit from a very low base; this was due to the introduction of the Medium-Term Expenditure Framework in these countries. Such a framework is currently being piloted in Tajikistan.

Voluntary health insurance is not a sizeable source of revenue in any of the post-Soviet countries (Fig. 4.3). Consequently, most private expenditure is made up of direct OOP expenditure that includes direct payments for private services, formal co-payments as part of statutory provision and informal payments to health personnel. The proportion of external funding and the importance of parallel health systems vary widely across the region.

Fig. 4.3 Proportion of total health expenditure by financing agent, WHO estimates, 2012

Source: WHO, 2014a.

Coverage (breadth, scope and depth)

Three dimensions of coverage through statutory financing systems can be distinguished: breadth, scope and depth. Breadth relates to population coverage and is concerned with which groups of the population are covered by the statutory financing system. Scope relates to the range of benefits to which covered people are entitled, such as through standard packages of benefits. Depth is concerned with the extent of user charges in place for accessing statutory benefits (Gotsadze & Gaál, 2010).

To a certain extent, the breadth of coverage reflects the choice of predominant statutory financing mechanism since independence. By their nature, insurance-based models define who is covered, creating an explicit ‘uninsured’ category (Kutzin, 2010). In Georgia, state-funded insurance under the Medical Insurance Programme in 2008–2013 initially covered only those households living below the poverty line, although coverage was expanded in 2012 to include pensioners, people with disabilities, students and under-six year olds, extending coverage to 45% of the population. The new government elected in 2012 aimed to expand coverage to the whole population. From February 2013 – in the first phase of the Universal Health Coverage Programme (known as the Minimal Package) – all previously uninsured people were provided with a package of benefits covering primary health care and emergency medical care. In the second phase, implemented in July 2013, the benefits package was extended to include elective surgery, oncology and deliveries.

At 80%, coverage was relatively high in both the Republic of Moldova and Kyrgyzstan because most of the non-working population (pensioners, children, full-time students, registered unemployed, etc.) were covered using transfers from the national budget without having to make formal contributions to the health insurance fund (Ibraimova et al., 2011b; Richardson et al., 2012). Nevertheless, the Republic of Moldova faces the common challenge of providing cover for the rural poor (who are officially 'self-employed' as farmers) and those employed in the informal economy (Richardson et al., 2012).

Population coverage under the Russian mandatory health insurance system has always been significantly higher, as enrolment is not linked to contribution but to place of residence and citizenship. While this challenges the very concept of what constitutes 'insurance', it does mean that only 1.8% of the population was uninsured in 2010 (Popovich et al., 2011). However, in January 2013, changes to the eligibility criteria in the Russian Federation have linked coverage more closely to citizenship and legally resident migrants working in the Russian Federation are now excluded from the mandatory health insurance system and expected to purchase private cover (Thomson, 2013). Cover for non-working citizens is meant to be financed from the regional budget but, in general, the regions only pay a fraction of the contributions that are needed because their preferred contribution to the health system is to finance health facilities in their locality directly (Popovich et al., 2011).

Although Kazakhstan and Georgia experimented with mandatory health insurance, only the Republic of Moldova, the Russian Federation, Turkmenistan and Kyrgyzstan have mandatory health insurance-based systems. In Georgia, the core purpose of the health insurance system was not to raise additional funds, but to improve the purchasing of services. Private health insurance companies were invited to act as purchasers, procuring services funded by the state health budget. These reforms were reversed after a change in government in 2012 and the state is again the sole purchaser of publicly funded health services.

The breadth of coverage in the other former Soviet countries is 'universal', in that citizenship is the sole qualifying factor. Belarus, Ukraine and Azerbaijan have not sought to limit formally the range of services covered under government guarantees. In Belarus, where public spending on health is comparatively high (and supply-side management comparatively rigid, in terms of the costs for pharmaceuticals, human resources and equipment), funding is sufficient to cover costs and OOP spending is comparatively low (see Fig. 4.3). However, in Ukraine and Azerbaijan the gap between government guarantees and budgetary funding allocated to health is wide and direct OOP payments have expanded to cover the resulting shortfall. The erosion of coverage depth in these two countries is therefore implicit rather than the result of explicit policy choices.

Elsewhere in the region, the *de facto* erosion of the depth of coverage has triggered explicit reforms, both in terms of scope and depth of coverage. In recognition of the gap that had opened up between government guarantees and government expenditure, Armenia, Kazakhstan and Uzbekistan now have more tightly defined benefits packages that limit the volume and range of services covered from government funds. The package of benefits has changed over time in all these countries, largely in response to changing economic and political realities. Defined benefits packages tend to be expanded in the run-up to elections, often beyond what is affordable, and are then reduced once fiscal pressures come to bear (Gotsadze & Gaál, 2010). In Kazakhstan and the Republic of Moldova the guaranteed package of benefits covers most services in emergency, outpatient and inpatient care; while in Armenia, Tajikistan and Uzbekistan benefits packages cover two categories of beneficiaries. One category comprises particularly vulnerable groups (such as orphans, people with severe disabilities, pensioners, veterans, households receiving welfare benefits and children according to various age brackets) who are entitled to unlimited comprehensive cover. The other category is the whole population that is entitled to a narrow range of services, generally including most primary care services, most emergency care services and the treatment of a narrow range of ‘socially significant diseases’ (mainly malaria, TB, HIV and vaccine-preventable diseases), as well as some particularly serious long-term conditions such as schizophrenia, diabetes and haemophilia. However, comorbidities or complications arising from these conditions or diseases are not generally included in the package of benefits.

The introduction of more tightly defined benefits packages in many countries was at least partially a response to the increasing share of informal payments in health financing throughout the 1990s. The aim was to provide a realistic package covering essential services, while formal co-payments were introduced at the same time in an attempt to ‘formalize’ informal payments. However, irrespective of whether co-payments are formal or informal (a distinction that is often blurred in practice), they are *de facto* limits on the depth of cover provided by the statutory system. In countries where private OOP payments constitute the main source of health financing (see Fig. 4.3), the depth of coverage provided by statutory financing systems is especially ‘shallow’ and households are paying for most health services at all levels of the system. In countries where OOP payments are lower, the depth of coverage is a serious issue mostly with regard to outpatient pharmaceuticals. Across the region, outpatient pharmaceuticals are excluded from the package of benefits for all but the most vulnerable groups, with the exception of a few ‘socially significant’ diseases and conditions, the treatment of which is, *de jure*, comprehensively covered in all former Soviet countries (see Chapter 9). Exceptions include the Republic of Moldova, where a defined list of outpatient medicines is covered by

the mandatory health insurance system, and Kyrgyzstan, which has introduced an Additional Drug Package as part of its benefits package.

Statutory financing systems

In most post-Soviet countries the public contribution to health financing comes from general taxation. Specific earmarked payroll contributions to the health system are only collected in Kyrgyzstan, the Republic of Moldova, the Russian Federation and, reportedly, in Turkmenistan. In Kyrgyzstan and the Republic of Moldova there is a single health insurance fund that collects (via fiscal authorities) earmarked payroll contributions at the national level and pools these with transfers from the national budget, which pay for cover for the non-working population. In the Republic of Moldova, a mandatory health insurance system was introduced after 2004, while the mandatory health insurance system in Kyrgyzstan was introduced in 1996 (Ibraimova et al., 2011a).

In the Republic of Moldova, the payroll contribution is a fixed proportion of salary (8% since January 2014), shared equally between employers and employees, with no upper or lower contribution limits; the self-employed pay a fixed flat rate fee (set at 8% of the forecasted average annual salary) to purchase their own cover, although different discount schemes have been applied in an attempt to improve coverage (Richardson et al., 2012; Turcanu et al., 2012). Contributions from the national budget to cover the non-working population were fixed as a share of total budgetary expenditure. This not only ensured that the contributions for the non-working population were meaningful, but also leveraged budget revenues into the health system. In Kyrgyzstan, the payroll tax contribution is set at 2% and is paid by the employer, with funding for the non-working population coming from budgetary transfers; farmers working their own land contribute the equivalent of 5% of their land tax for health insurance (Ibraimova et al., 2011b). In the Russian Federation, the payroll tax contribution is 5.1% of the payroll paid by the employer and, since 2012, the insurer has been the Federal Mandatory Health Insurance Fund, rather than the Territorial Mandatory Health Insurance Funds operating at the regional level, which was the original arrangement. When health financing reforms were introduced in the Russian Federation in 1993, public administration was highly decentralized and regional governments had a lot of discretion in the extent to which reforms were implemented or not. As a result, the reforms were never fully implemented and only since 2005 have policy-makers started to address some of the more fundamental problems with health financing in the Russian Federation (Popovich et al., 2011).

The key feature of the insurance-based systems in Kyrgyzstan and the Republic of Moldova is that they have been used as mechanisms to improve equity and efficiency in health financing; mandatory health insurance reforms have acted as the driving force for comprehensive reforms of health financing. Main achievements included separating purchasing and provider functions, consolidating pooling functions by creating a single pooling agency, and guaranteeing a realistic package of benefits in order to build sustainable health financing mechanisms. Nevertheless, progress in containing OOP expenditure and improving strategic purchasing has been relatively modest in the Republic of Moldova. Yet it is not necessarily a 'failure' of mandatory health insurance that most contributions come from the government budget (54% in 2010 in the Republic of Moldova, compared with 45% from payroll taxes and 1% from individuals). At the same time, the limited revenues mobilized under the abandoned mandatory health insurance schemes in Georgia were considered a major shortcoming (Chanturidze et al., 2009). Although the introduction of mandatory health insurance in Kazakhstan was short-lived (it was abandoned amid widespread charges of corruption, as the fund failed to meet commitments to providers), it succeeded in shifting relationships between purchasers and providers and fostered innovation in payment systems (Sheiman et al., 2010).

When mandatory health insurance was introduced in the Russian Federation in 1993, one of its roles was seen as providing a reliable complementary stream of funding in order to overcome the chronic underfunding of the health sector. However, while it provided a reliable source of funds, the government cut total budgetary health spending, as there was no mechanism to ensure that the regional governments met their devolved responsibilities for funding the non-working population (Popovich et al., 2011). This decentralization of health financing was also a weakness in Kazakhstan's short-lived experiment with mandatory health insurance, with a lack of coordination between regional governments and regional insurance funds and a highly fragmented pooling of resources (Kutzin et al., 2010b). Only in the Republic of Moldova has the introduction of mandatory health insurance actually increased public revenues for the health system through the above-mentioned principle of equivalency in government and payroll contributions (Sheiman et al., 2010).

Many of the challenges facing post-Soviet countries in collecting mandatory health insurance contributions coincide with the overall challenge of collecting income taxes. The scale of the challenge varies across the region but is related to the size and persistence of informal economies; inconsistent tax legislation; the pervasiveness of tax evasion; high levels of unemployment and high levels of labour migration. Informal economies, by their very nature, do not contribute to the budget through regular channels. However, tax evasion can also be

persistent in the formal economy where employees will receive only part of their remuneration through the books (their 'official' salary), while also receiving unofficial cash payments or in-kind benefits in order to reduce their personal income tax and the payroll costs for employers. High levels of unemployment or labour migration (whether temporary or permanent) also have implications for the state's ability to raise revenues from income tax because the resident working population is markedly reduced relative to the non-working population. This can place a high tax burden on formal employees, which can discourage the greater transparency necessary for informal economies to come out of the shadows and to deter widespread tax evasion; although for this to be achieved a rational and enforceable programme of taxation is also essential. This is a considerable challenge across the region and thus far only Georgia has made significant progress towards implementing a consistent body of tax legislation with the specific aim of increasing transparency and reducing tax evasion and expanding fiscal space.

Customs – duties as well as consumption taxes – tend to be easier to administer and collect than income taxes (Roberts et al., 2008), which is why a greater share of general government revenues in all the former Soviet countries are from these sources. This is potentially problematic because final consumption taxes such as value added tax (VAT) are highly regressive, in that poorer households pay more as a proportion of their income than richer households. Corporation tax, or profit shares where enterprises are not extensively privatized, such as in Belarus, is a less regressive way of raising government revenues than final consumption taxes and is much closer to the Soviet system of taxation (Kornai, 1992). In Azerbaijan, Kazakhstan, the Russian Federation and Turkmenistan budgetary revenues are to a large degree dependent on energy exports, making them highly vulnerable to price fluctuations on global commodity markets. Azerbaijan and the Russian Federation have put reserve funds in place in order to smooth such fluctuations and maintain social spending, including health expenditure; however, these reserve funds do not help to contain government expenditure or to foster long-term economic stability.

Pooling of funds

Pooling arrangements in health financing vary widely between countries. In Azerbaijan decentralization has meant that pooling is the responsibility of regional-level government, although there is also some overlap with national-level pooling in the Ministry of Health; the same is true of Ukraine, Uzbekistan and Tajikistan, except that decentralization has gone further there and the local-level government pools resources and purchases services. In these countries

revenue collection, pooling and purchasing functions are integrated and allocation mechanisms are therefore implicit. However, reforms in Ukraine aim to overcome the previous fragmentation and pool resources for primary care at local level and resources for secondary, tertiary and emergency care at regional level. In the country's four pilot regions (which cover 27% of the population), procurement of primary care services was consolidated in 2013.

Successive waves of decentralization and recentralization in Kazakhstan have seen pooling devolved first to a health insurance fund and the Ministry of Health, then to regional government (with an intermittent phase of pooling at local level) and from 2010 reconsolidation at the national level in the Ministry of Health. A somewhat similar pattern of decentralization and recentralization of pooling occurred in Kyrgyzstan but within the framework of mandatory health insurance. In Armenia, pooling is centralized at the national level in the Ministry of Health, and the State Health Agency under the Ministry of Health is the purchaser of services.

In Armenia, Kazakhstan, Kyrgyzstan and the Republic of Moldova most health service providers are autonomous and enter contracts with the purchaser. In the Russian Federation, health service providers contract with the Territorial Mandatory Health Insurance Fund for their region but they also receive funds from the local government budget to cover much of their everyday running costs. Pooling is thus not only decentralized but also fragmented between the central or local government budget and the mandatory health insurance system; however, recent reforms have sought to centralize the mandatory health insurance system and increase the proportion of spending channelled through mandatory health insurance funds rather than local budgets. The Territorial Mandatory Health Insurance Fund contract with nominally competing private insurance companies according to a weighted capitation formula. The insurance companies then contract with providers but the Territorial Mandatory Health Insurance Fund rather than the private health insurance companies are the risk bearers, so that these companies are intermediaries and this is where they generate their revenues – by law they are not allowed to make profits (Popovich et al., 2011).

Payment mechanisms

Most funding for health facilities in Azerbaijan, Tajikistan, Uzbekistan and Ukraine still follows the Soviet tradition of input-oriented (e.g. staff and/or bed numbers) prospective transfers based on historical incrementalism (i.e. based on the previous year's allocation adjusted for inflation and budget growth) and strict line-item budgeting. This is a major cause of inefficiency as it does not provide incentives for the reconfiguration of services. In Belarus, new norms

for hospital payments were introduced so that capacity beyond a certain level was not rewarded but the inflexibility of line-item budgeting has led policy-makers to start the process of introducing alternative, output-based funding mechanisms. Although provider autonomy and contract-based purchasing have been introduced in Armenia, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova and the Russian Federation, purchasing is not truly selective. For example, although the State Health Agency in Armenia is not obliged to contract with all former state-owned facilities, in practice it continues to do so; the situation is similar in the Republic of Moldova.

In Kyrgyzstan the mandatory health insurance fund contracts with hospitals to prospectively purchase a certain volume of services using case-based payments (diagnosis-related groups – DRGs). Initial problems with contracting were rooted in the need for health facility managers to ‘unlearn’ habits acquired when line-item budgeting was in place so that they did not accumulate arrears (assuming soft budget constraints) or provide more services than were stipulated in the contract. However, case-based payments also incentivized overtreatment and unnecessary admissions and this has proved challenging to overcome. From 2008, performance indicators in Kyrgyzstan have been included in provider contracts in order to improve the quality of care and financial management. Purchasing mechanisms used by the Moldovan National Health Insurance Company have similarly evolved over time. Prospective per capita financing is used for emergency care (with quality-incentive bonuses), while a range of mechanisms (including capitation, treated cases, per visit fees, global budget and retrospective payments) are used for primary and specialist outpatient care. For inpatient care, global budgets are used for patients requiring long inpatient stays (such as psychiatric care or dialysis), while DRGs have been used since 2013 for most remaining cases of hospitalization.

Case-based payments for hospitals can help to promote a more efficient use of resources and increase productivity; for this reason they are high on the reform agenda in Belarus, the Republic of Moldova, Tajikistan, Ukraine and Uzbekistan. Case-based payment mechanisms were also considered the most appropriate for the Russian Federation when mandatory health insurance was first introduced but in practice each region used a different method so that hospitals were paid retrospectively by finished cases in 48 regions, by actual bed-days in 38 regions, by agreed volume of care in 5 regions, by capitation in 1 region and by line-item budgeting in 1 region (Popovich et al., 2011). However, payments from local government generally relied on line-item budgeting mechanisms. This changed in 2014, when the Russian Federation introduced a nationwide DRG system for inpatient medical services delivered under the mandatory health insurance programme.

Primary care reforms across the region have often included a move towards per capita financing. While still confined to pilot programmes in Ukraine and Tajikistan, it is the main method of funding for primary care in the remaining countries of the region. Increasingly, more sophisticated weightings are being used in order to better reflect the health needs of local populations, such as three age groups to adjust capitation payments in the Republic of Moldova. In Kazakhstan and Armenia performance-related bonus payment mechanisms have also been piloted and are being rolled out nationwide; similar reforms have been piloted since 2013 in Kyrgyzstan and since 2014 in Tajikistan. In the Republic of Moldova performance-related bonus payment mechanisms in primary health care were started in 2008, abandoned, and then reintroduced in 2013, covering up to 7% of total expenditure on primary health care.

In Azerbaijan, Belarus, Kazakhstan, the Republic of Moldova, the Russian Federation and Ukraine health workers in the state sector are salaried, according to a centrally determined salary scale, with adjustments to reflect the number of years of work experience, postgraduate qualifications and the responsibilities of the post; this base salary can then be increased through bonus payments, such as for hazardous working conditions or working in less prestigious sectors or rural areas. In Azerbaijan and the Russian Federation incentive payments, such as to encourage greater productivity or reward higher quality work, are also possible but not used widely. Similarly, bonuses to primary care physicians based on the size of the population served and the quality of care started to be paid in Ukraine's pilot regions in 2013.

In Georgia, physicians are employed by the facilities where they work and salaries are not centrally determined; the same is true of hospital doctors in Armenia. As a rule, health workers in the private sector have more differentiated payment mechanisms, such as salaries plus profit shares. However, across the region, in both the private and the public sector, health workers supplement their income through direct payments from patients (see below). Supplementing official salaries seems to be particularly widespread in Armenia, Azerbaijan and Tajikistan where physicians' salaries do not cover the minimum necessary for subsistence. Prescribing physicians are also given bonuses by pharmaceutical companies to reward them for prescribing their products (see Chapter 9). Overall, health workers across the region remain very poorly paid and many respond by leaving the health sector or migrating to other countries (see Chapter 5).

Out-of-pocket payments

As mentioned above, OOP payments dominate private health expenditure.

They include direct payments for goods or services that are excluded from the package of benefits; user charges or cost sharing for services that are only partially covered by the package of benefits; informal payments for goods or services that should be funded from pre-paid sources; and gratuities for health workers.

OOP spending on health has expanded since the end of the Soviet Union, as pharmaceutical costs have risen and health budgets have been cut; the increase in OOP payments was therefore generally due to underlying contextual shifts rather than explicit reform strategies (Sheiman et al., 2010). The relative contribution of OOP payments to total health expenditure varies across the region (see Fig. 4.2). In those countries in which OOP payments contribute a large share of total health expenditure, they pose a serious challenge to equity as they reduce financial protection, equity in finance and equity in utilization (Smith & Nguyen, 2013). Where patients have to pay OOP for essential services this deters necessary treatment; in this regard the amounts that need to be paid are more pertinent than whether they are levied through formal or informal channels (Balabanova et al., 2012). Patients pay more OOP for inpatient and specialist outpatient treatment than for primary care services and the more life-threatening the condition, the more they will pay – formally or informally – in order to access what is perceived to be the highest quality care.

Direct payments

Payments for outpatient pharmaceuticals dominate OOP payments across the region (see Chapter 9), while dental care is also funded mainly through OOP payments. A secondary analysis of household surveys in 11 eastern and central European countries found that expenditure on drugs accounted for as much as 75% of household spending on health in the Republic of Moldova and more than 50% in Kyrgyzstan, Tajikistan and Azerbaijan (Smith & Nguyen, 2013). While prices were controlled, outpatient pharmaceuticals and dental care were not included in the Soviet package of health benefits. The reformulation of benefits packages in Armenia, Georgia, Kyrgyzstan, the Republic of Moldova and Uzbekistan means that many patients are now expected to pay OOP (or arrange health insurance) for curative services that were covered in Soviet times. Where patients are paying OOP for services nominally included in the package of benefits these can be considered informal payments (see below). Direct payments are also made for services and elective procedures in private facilities. In Belarus where, with the exception of dental care, private practice is not commonplace, it is possible to pay directly in state-owned facilities for a more luxurious private room or elective diagnostic procedures, although generally inpatient care is free at the point of use (Richardson et al., 2013).

User charges/cost sharing

In Armenia, Georgia, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, formal co-payments for services have been introduced in an attempt to reduce informal payments as a means to strengthen gate-keeping by penalizing self-referral (Gotsadze & Gaál, 2010). The experience with co-payments in Armenia shows that, on its own, the introduction of formal co-payments is insufficient to reduce informal payments in the system. Instead, this needs to be part of a complex package of measures, including meaningful remuneration for medical staff (Akkazieva & Jowett, 2013). In Kyrgyzstan, greater transparency and clarity with regard to entitlements, alongside the introduction of formal co-payments, has proved effective in reducing the share of informal payments (Ibraimova et al., 2011b). In Georgia, treatment for certain conditions (such as heart disease) was subsidized by the state but there was a lack of transparency over entitlements and the level of co-payments, which fostered the levying of informal payments. A voucher system for referrals was introduced in 2010 to improve transparency; the voucher had the formal co-payment cost printed on it to inform patients (Smith, 2013). Without initiatives to improve transparency, the introduction of formal co-payments can have an inflationary effect whereby patients are expected to pay both formally and informally for treatment, as was the case in Turkmenistan (Rechel, Sikorskaya & McKee, 2009). Formal co-payments for services included in the package of benefits are envisaged in Kazakhstan and Tajikistan (Khodjamurodov & Rechel, 2010; Katsaga et al., 2012) but considered unconstitutional in Belarus, the Russian Federation and Ukraine.

Informal payments

Informal payments can be defined as direct payments to individual or institutional health-care providers – in kind or in cash – that are made outside official payment channels, or purchases of goods or services that are meant to be covered by the health system but for which in practice informal charges are levied (Lewis, 2000). Informal payments and in-kind gifts were frequent during the Soviet era as a form of ‘gratuity’ payment given to the doctor after a consultation or an operation. Reasons for paying ‘under the table’ were numerous but gifts and informal payments were commonly seen by the population as a way to compensate generally underpaid medical staff. They were also considered a way of jumping the queues and benefiting from better attention and higher quality treatment, offering a form of informal exit from a system in which neither of the normal mechanisms to improve quality – exit and voice – are available (Gaál & McKee, 2004). However, since independence the nature of informal payments has changed and many are now levied according to fixed ‘rates’ and

requested in advance of treatment. Rates are set either by facilities or individual staff and take into account the patients' perceived ability to pay (Gaál, Jakab & Shishkin, 2010).

By their nature, informal payments are hard to measure. However, household budget surveys provide an indication of the scope of the problem. In Ukraine in 2010, for example, informal OOP payments accounted for an estimated 7.7% of total health expenditure and 17.7% of private expenditure (State Statistics Service of Ukraine, 2014). Importantly, informal payments are not equally distributed among health services and health personnel (Bazylevych, 2009; WHO, 2012; Stepurko et al., 2013). They are more prevalent in inpatient than outpatient facilities (Gaál, Jakab & Shishkin, 2010). In the Russian Federation this disparity has grown over time, despite an overall drop in the burden of informal payments (Popovich et al., 2011). A survey conducted in Ukraine in 2010 found that approximately 40% of those paying for hospital services had to borrow money or sell assets, while about 60% of respondents who thought they needed care forewent services; inability to pay mainly affected those with poor health or low incomes (Tambor et al., 2013). Informal payments are also more widespread in health services that are perceived by patients as being immediate and unavoidable, such as surgery and obstetrics; they can also vary by level of specialization or the complexity of the case. There is a wide range of local and individual modalities concerning the way informal payments are shared among health personnel. Informal payments are either kept by the receiver or shared among members of the care team; they can also be partly pooled in a special 'account' for providing facilities with basic equipment (Shishkin, 2003).

Where there is a lack of clarity on the boundaries of the state-funded package of benefits (as in Armenia and Georgia) or where the extensive benefits package is chronically underfunded (such as in Azerbaijan, Tajikistan, the Russian Federation and Ukraine), there is a blurring of what constitutes state and private provision and many charges are routinely levied even though they should formally be covered. For example, inpatients can be given a list of medicines and medical supplies that they are expected to bring with them to hospital; they are then asked to pay for food or supply this in kind. Informal fees can also substitute formal direct payments or co-payments for services – this can benefit both the health worker (as they will generally reap the full financial benefit) and the patient (as the informal price may be lower than the formal fee). Alternatively, doctors can inappropriately refer patients to their parallel private practice for treatment that is not covered under the statutory benefits package. Finally, as with any other direct payment for services, informal payments can produce perverse incentives and encourage over-treatment. They are more common where an identifiable action is administered to the patient,

with the inevitable incentive to offer inappropriate or ineffective treatment.

The most obvious reasons for the prevalence of informal payments in the former Soviet countries are the relatively low salaries of health workers, payment of which has sometimes been seriously delayed. Where health systems are underfunded, patients have to fill the gap and pay OOP in order to access care. Informal payments are further enabled by the lack of clearly defined benefits packages, underdeveloped systems of monitoring and regulation and a general lack of transparency in the health system. However, it is also important to note the patient perspective. Their willingness to pay informally for services reflects their desire to access the best quality services and receive personalized care. This suggests that, in order to overcome informal payments, comprehensive and well-sequenced policies are required that encompass cultural aspects and traditions rather than focus narrowly on financial aspects (Gaál, Jakab & Shishkin, 2010).

External sources of funds

External sources of funds comprise financial assistance to the health sector, which may take the form of loans, grants or humanitarian aid from international development agencies. The role of external resources in total health expenditure varies considerably between post-Soviet countries. Broadly speaking, it is related to the relative wealth available domestically (Fig. 4.3). External resources account for less than 1% of total health expenditure in countries that have considerable natural resources (Azerbaijan, Kazakhstan, the Russian Federation and Turkmenistan) or the most industrialized economies (Belarus, the Russian Federation, Ukraine). In the poorest countries of the region, on the other hand, international development assistance accounts for an important share of total health expenditure. In 2012, external resources accounted for 12.2%, 9% and 7.3% of total health expenditure in Kyrgyzstan, Tajikistan and the Republic of Moldova respectively (WHO, 2014a). Where the proportion of total health expenditure from external funds is greater, donor coordination becomes crucial in order to avoid duplication and waste and spend funds in line with national priorities (Rechel & Khodjamurodov, 2010). So far, Kyrgyzstan is the only country of the region to have formally adopted a SWAp to coordinate external sources of funds for the health sector (see Chapter 3).

Parallel health systems

At independence, the former Soviet countries inherited a substantial health infrastructure that was not under the administrative control of the ministries of health. Other branch ministries and some major industries had their own health

systems, which they financed directly (see Chapter 3). The size and importance of these parallel health systems differ across the region. In Kyrgyzstan financing for parallel systems accounted for 5% of total health expenditure in 2008 (Ibraimova et al., 2011b). In Armenia and Georgia, where providers have been made autonomous, central purchasers are able to contract with parallel providers and thereby absorb the extra capacity into the mainstream health system; patients can also purchase services directly, as though they were private health-care providers (Chanturidze et al., 2009; Richardson, 2013). In Azerbaijan parallel service provision is still a prominent feature of the system and parallel facilities are among the providers of private health services to those who can afford them (Ibrahimov et al., 2010). However, the Ministry of Health has aimed to reduce parallel health systems in the country and the biggest network of parallel health systems, belonging to the State Oil Company of Azerbaijan, was transferred to the Ministry of Health system in 2012. In the Russian Federation, voluntary health insurance companies also contract with parallel providers (which patients perceive to offer the best quality) and compete for customers based on the access they can provide (Popovich et al., 2011). Belarus has begun the painful process of absorbing the parallel structures into the mainstream health system, despite significant resistance from health personnel, but parallel structures have not become major private health-care providers (Richardson et al., 2013). In Ukraine, some of the larger parallel providers, confronted with falling revenues from their branch ministries, have proven to be the most innovative in terms of developing insurance-based mechanisms to finance care for their members (Lekhan, Rudyi & Richardson, 2010). In Tajikistan, Kazakhstan and Uzbekistan parallel systems operate in much the same way as they always have done; there has been little rationalization of facilities, and expenditure through other branch ministries is still not reflected in overall health expenditure data (Ahmedov et al., 2007; Khodjamurodov & Rechel, 2010; Katsaga et al., 2012).

Voluntary health insurance

Voluntary health insurance is generally not a significant feature of post-Soviet health systems and only contributes a very small proportion to total health expenditure (see Fig. 4.3). This is the case even in Georgia, where in 2007–2013 commercial health insurance was embraced as the main mechanism for providing pre-paid health care to the general population. Nevertheless, voluntary health insurance is a significant feature of public policy debates in Armenia, Ukraine, the Republic of Moldova and the Russian Federation, albeit for different reasons. Voluntary health insurance usually supplements the statutory system, although complementary insurance to cover outpatient

pharmaceutical costs also exists. Across the region there is minimal regulation of voluntary health insurance markets (Thomson, 2010).

The Russian Federation is, however, now seeing a rapid development of voluntary health insurance as ‘supplementary’ to the mandatory health insurance system. Voluntary health insurance providers compete on the comfort of facilities and their ability to provide access to the most prestigious and exclusive facilities. However, there are also serious potential conflicts of interest, as the private health insurance companies – which are contracted under the mandatory health insurance system to purchase care for the eligible population in their catchment area – are also allowed to sell voluntary health insurance packages to the same clients. In all the former Soviet countries, voluntary health insurance premiums are generally well beyond the reach of most people and packages are aimed at corporate clients (mainly multinational companies) and the very wealthy, which is why access to exclusive facilities, or treatment abroad, is a key selling point. In Uzbekistan the state insurance company provides cover at rates significantly lower than those provided by commercial insurers but policies are not comprehensive and still aimed at high-income groups. Premiums for complementary voluntary health insurance are also considerably lower than those available from commercial insurance providers, as these schemes are run on a not-for-profit basis by trade unions or international NGOs.

In the Republic of Moldova private insurance companies are constrained by law from administering funds under the mandatory health insurance system; however, they have been lobbying hard for this potentially lucrative business. Thus far, these calls have been resisted in order to prevent fragmentation of the system and reduced risk pooling. Where private insurance providers have been able to get a significant hold on health financing in a country they evolve into a powerful lobby that can block reforms that seek to improve equity or efficiency in the health system (Mossialos & Thomson, 2004). This has been a particular challenge in Georgia where, in 2013, following a change of government, the country has attempted to replace multiple competing voluntary health insurance providers with a single non-profit mandatory health insurance fund. The main shortcomings of the Georgian voluntary health insurance-based model included its limited efficiency and the challenge it posed to equity. While it was well targeted towards providing cover for the most vulnerable households (Hou & Chao, 2008), it did not contain or drive down costs in the provision of the Medical Assistance for the Poor programme. The rapid increase in health spending in Georgia from 2007 reflects a high level of medical inflation after this programme was introduced; administrative costs were extremely high and some voluntary health insurance companies appeared to boast profit margins of 49% (Gabrichidze et al. 2011).

In Georgia, the voluntary health insurance market expanded dramatically in comparison to other countries of the former Soviet Union, as a result of the Medical Assistance for the Poor programme. This programme targeted the poorest 20% of the population in a way that no other post-Soviet country with limited resources tried to do. Although its effects on financial protection are disputed (Gabrichidze et al., 2011), there is some evidence that it reduced private OOP payments for beneficiaries of the programme (Bauhoff, Hotchkiss & Smith, 2010). As mentioned above, since a change in government in 2012, Georgia has dropped its approach based on private health insurance and instead aims to provide universal coverage to the whole population.

In Armenia and some other low and middle-income countries of the former Soviet Union there was widespread experimentation with complementary community health insurance, which targeted poor rural populations to provide cover for health services excluded from the main package of benefits, most often outpatient pharmaceuticals. These schemes were instigated and heavily subsidized by international NGOs. In Armenia by 2001, participation for a 12-month period varied from 10% to 90% from one village to another and around 20% were members of a scheme at a given point in time. Overall, the scheme covered 128 villages which accounted for 15% of rural communities in Armenia or about 80 000 people (Poletti et al., 2007). As of 2013, these initiatives had ceased to operate. As in other parts of the world, schemes for the rural poor proved unsustainable without significant external subsidies and even then affordability was a core barrier to higher participation rates (De Allegri et al., 2006; Poletti et al., 2007; Parmar et al., 2014). Furthermore, the limited package of benefits was considered by potential participants to offer poor value for money and cover for people with chronic conditions was inadequate (Polonsky et al., 2009).

One of the main factors constraining the development of voluntary health insurance in the former Soviet countries is that it cannot protect patients from informal payments, so in effect they have to pay twice. The limited ability to pay insurance premiums, the lack of sufficient regulatory capacity and a general lack of trust in insurance schemes are other inhibiting factors (Thomson, 2010).

Conclusion

All the former Soviet countries inherited health systems with the same basic health financing structures but national governments have shaped and developed their health systems following widely diverging paths. Mandatory health insurance models have both flourished and floundered, while tax-based systems have been privatized by design or by stealth. Nevertheless, there are

key challenges in health financing that need to be addressed by all countries of the region in order to move towards universal health coverage. Built-in inefficiencies will require increasingly complex solutions. For example, while fragmented pooling of resources in the statutory system is a systemic source of inefficiency and inequity, this pales by comparison with the inefficiency and inequity resulting from the high proportion of OOP payments in total health expenditure. OOP payments also highlight the gaps in statutory coverage and expose households to catastrophic health-care costs. Finally, there is a need to tackle informal payments through comprehensive reforms that strengthen the regulation of the health system, improve transparency and knowledge about entitlements, strengthen redress mechanisms, improve the responsiveness of services and increase the low wages of health workers.

This chapter has shown that different aspects of health financing cannot be treated as discrete entities; changes in one area will require changes elsewhere in the system. However, doing nothing is not a reasonable option. Given their common starting point, there is great scope for countries of the region to learn from the experiences (both positive and negative) of their neighbours. However, the key factor is political commitment: the willingness to prioritize statutory financing for the health system and the realization that it is possible to reduce informal payments and improve financial protection even in resource-constrained environments.

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Chapter 5

Health workforce

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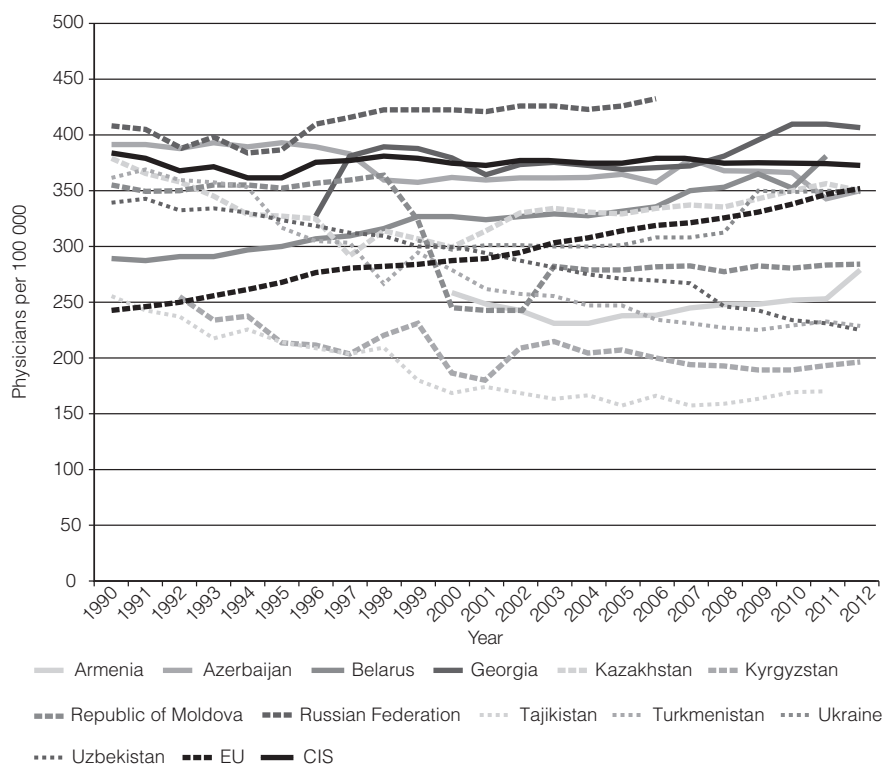
Introduction

The provision of a sufficient number of adequately trained health professionals is an essential health system function. In the post-Soviet countries, systems of training and retraining the health workforce have undergone varying levels of reform, in some cases as a consequence of the Bologna process, which seeks convergence of European higher education systems, and also as a result of efforts to modernize medical education, strengthen family medicine and upgrade the training of nurses. In the Soviet period, medical graduates specialized narrowly and family medicine did not exist. There were few nurses compared to the number of physicians, while salary levels for all health professionals were low (Danishevski, 2006). This chapter provides an overview of trends and reforms since the countries of the region gained independence in 1991. It discusses the availability and distribution of human resources across the former Soviet countries, as well as the training and development of health professionals.

Health workforce trends

All countries of the former Soviet Union inherited a relatively large health workforce at independence and an especially large number of physicians per capita. In the 1990s national trends started to diverge but there was a drop in the number of physicians per population in most countries, in contrast to a steady growth in numbers of physicians across the EU. In the late 1990s the average density of physicians in what was then the Commonwealth of Independent States (CIS) had stabilized, reaching the average of 372 per 100 000 in 2012; however, this was still higher than the EU average of 346 per 100 000 (Fig. 5.1).

There are, however, variations across the region, with the number of physicians ranging from 170 per 100 000 population in Tajikistan to 431 per 100 000

Fig. 5.1 Physicians (physical persons) per 100 000 population in the former Soviet countries and the EU, 1990–2012

Source: WHO, 2014.

in the Russian Federation (one of the highest rates in the WHO European Region), with the rates in the latter strongly influencing the average of the post-Soviet countries. During the 2000s, physician supply has grown in Armenia, Belarus, Georgia, Kazakhstan, the Russian Federation, Tajikistan (since 2009) and Ukraine but has fallen or remained stable in Azerbaijan, Kyrgyzstan, the Republic of Moldova, Turkmenistan and Uzbekistan.

Despite the relatively large number of doctors in most countries, it is important to stress that they are unevenly distributed geographically and in terms of specialization. Health workers tend to be concentrated in the capitals or large cities, while there are shortages in rural and remote areas. Most countries have attempted to attract doctors to rural and remote areas and retain them there, for example by providing higher quality accommodation and other social benefits in Belarus or increased salaries in Kazakhstan (Katsaga et al., 2012; Richardson et al., 2013) but these attempts have only been partially successful.

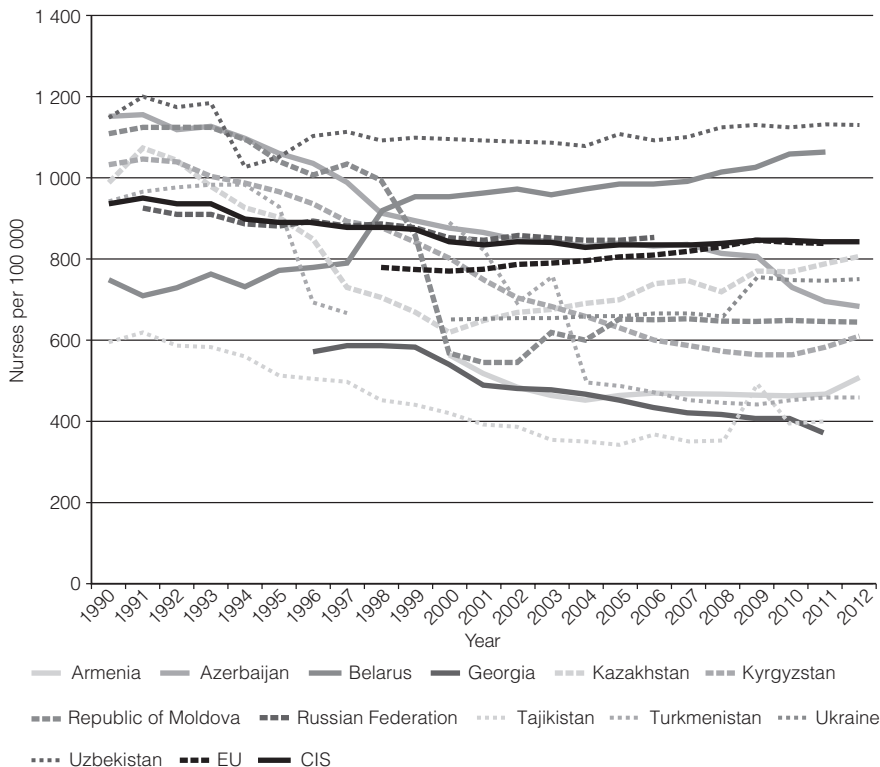
Primary care is another area that has suffered from shortages of personnel, despite the increasing supply of health professionals (see Chapter 7). While policies

in many countries anticipate a shift from hospital to primary care settings, in practice in most countries the ratio of health workers involved in secondary and tertiary care has remained fairly stable, while the number of general practitioners (GPs) per capita, albeit growing, remains low (WHO, 2014).

Traditionally, the mid-level health workforce in the post-Soviet countries includes nurses, midwives and *feldshers*. *Feldshers* represent a category of health workers that provide basic medical care. They work relatively independently, mostly practising in rural areas where they perform preventive, diagnostic and therapeutic tasks, prescribe some drugs and perform some administrative functions.

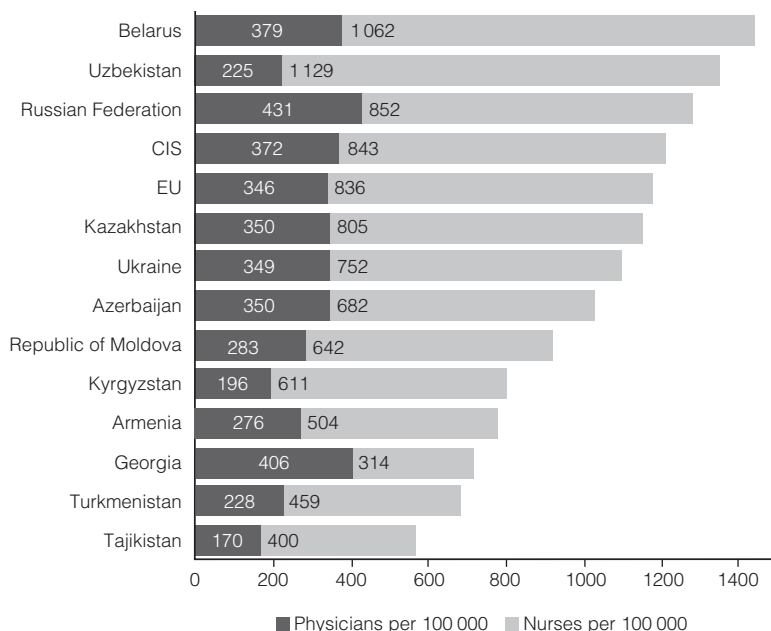
The number of nurses in the region decreased from 938 per 100 000 population in 1990 to 843 per 100 000 in 2012, which was still slightly higher than the EU average (836 per 100 000). Uzbekistan and Belarus have retained a markedly higher number of nurses (1129 and 1062 per 100 000 population respectively), while Georgia, Turkmenistan and Tajikistan have the lowest densities of nurses in the region (314, 459 and 400 per 100 000 population respectively). Azerbaijan, the Republic of Moldova and Turkmenistan have seen large decreases in nursing staff in the 1990s and 2000s (Fig. 5.2).

Fig. 5.2 Nurses (physical persons) per 100 000 population in the former Soviet countries and the EU, 1990–2012



Source: WHO, 2014.

Fig. 5.3 Physicians and nurses (physical persons) per 100 000 population in the former Soviet countries and the EU, 2012 or latest available year



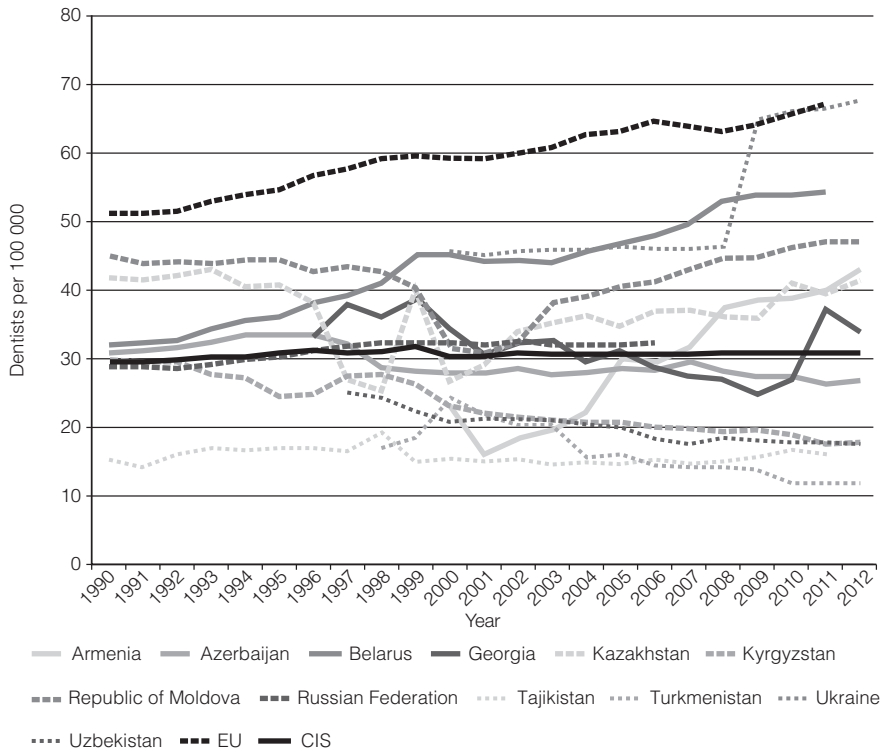
Source: WHO, 2014.

The decline in the numbers of health workers, particularly nurses, was felt most acutely in the 1990s after the breakup of the Soviet Union, when emigration, low salaries and lack of professional development drove large numbers of health professionals either abroad ('brain drain') or into other sectors of the economy ('care drain'). However, there is still a shortage of nurses in many parts of the region, in particular some countries of central Asia and the south Caucasus. In the Russian Federation there was a 10% increase in the ratio of nurses per population between 1990 and 2009 but an approximately 60% decrease in the ratio of midwives and *feldshers* per population (Popovich et al., 2011).

Fig. 5.3 illustrates that the availability of health workers in post-Soviet countries varies almost two-fold across the region, with Belarus and Uzbekistan having the highest rate and Turkmenistan and Tajikistan the lowest, although some of these differences might be due to differences in classification.

Data on physicians and nurses measured as full-time equivalents (FTEs) is less complete; however, the information that is available for 2009 indicates that in many countries of the region (e.g. Belarus, Kazakhstan, the Republic of Moldova, Tajikistan and Turkmenistan) more than one FTE per physician or nurse is common (WHO, 2014).

Fig. 5.4 Dentists (physical persons) per 100 000 population in the former Soviet countries and the EU, 1990–2012

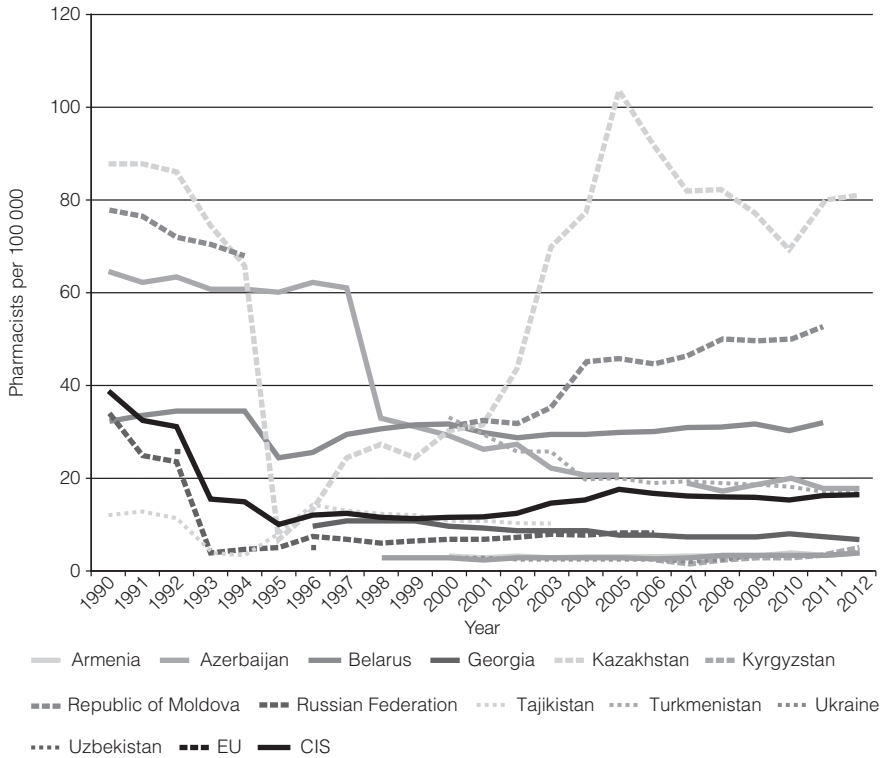


Source: WHO, 2014.

The number of dentists in post-Soviet countries is substantially below the EU average (31 compared to 67 per 100 000 population), with the exception, in recent years, of Ukraine (Fig. 5.4). Although these figures might be underestimates (see below), they co-exist with generally poor dental health throughout the region. In the countries of central Asia (Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) the shortage of dentists is particularly marked, with fewer than 20 dentists per 100 000 population.

The number of pharmacists in the region has more than halved between 1990 and 2012, from 39 to 17 per 100 000 population, reflecting changes to the pharmaceutical sector throughout the region in the 1990s (Fig. 5.5). However, since the early 2000s the number has stabilized in most countries, although there are large variations across the region, ranging from 4 pharmacists per 100 000 population in Armenia, Ukraine and Uzbekistan to 81 per 100 000 in Kazakhstan. However, the officially recorded numbers of dentists and pharmacists in post-Soviet countries are likely to be underestimates. With the expansion of the private sector, there has been an increase in both the demand

Fig. 5.5 *Pharmacists (physical persons) per 100 000 population in the former Soviet countries and the EU, 1990–2012*



Source: WHO, 2014.

and supply for these specialties. However, most post-Soviet countries do not require private practitioners to be registered so the degree of underestimation is difficult to ascertain.

Professional mobility

Although at independence the countries of the former Soviet Union inherited a large pool of health workers, shortages are now a serious concern in many countries, something that has been in part disguised as many health workers have continued to work beyond their retirement age. The health workforce across the region has consequently aged considerably, despite many young people still being attracted to train as doctors and nurses. In 2012, approximately one-quarter (24.7%) of active physicians in Ukraine had reached retirement age. Retaining new graduates in the state health system has emerged as an acute concern in most countries, as new graduates move between countries and sectors to secure a decent standard of living.

International mobility is a particular challenge for the poorer countries of the region. There has been a churning effect as the Russian Federation pulls in health workers from other post-Soviet countries; medical qualifications are mutually recognized and for many there is no language barrier. Professional mobility between Belarus, Kazakhstan and the Russian Federation has been further facilitated by the Customs Union, which allows for the free movement of labour between these three countries (Richardson et al., 2013). Key ‘push’ factors in the migration of health workers include low salaries, poor working conditions, the lack of opportunities for professional development, the low status of the medical profession and, in rural areas, poor living conditions and infrastructure at the community level. In some countries, civil war and political instability have also been a push factor.

The international recruitment of health workers by countries outside the former Soviet Union is not a significant feature of most countries of the region. However, the Republic of Moldova is an exception, with main destination countries being Romania, Italy and France; this is because many people are now able to travel freely across the EU as they hold dual Moldovan and Romanian nationality. However, the migration of health workers from the Republic of Moldova leads to both ‘brain drain’ and ‘brain waste’. The latter is due to the fact that very few migrating nurses and doctors manage to find clinical work abroad that would utilize their skills because Moldovan qualifications are not recognized automatically within the EU due to the shorter training periods for clinical specialties (Turcanu et al., 2012). The Republic of Moldova has now developed a Human Resources Development Strategy that aims to monitor and measure the scale of professional mobility, while also facilitating circular migration back to the country of origin.

Monitoring the scale of migration patterns is now also a concern in Belarus, although the focus is largely on internal mobility, with health workers moving from rural to urban areas and from regional centres to the capital (Richardson et al., 2013). In Azerbaijan, where there is an extensive network of private providers, there is also an internal brain drain from the state system to the private sector (Ibrahimov et al., 2010).

Internal migration, leading to concerns about how to ensure that the needs of rural communities are met through the recruitment and retention of appropriately qualified health workers, has emerged as a key challenge for all post-Soviet countries. In the Soviet era the problem was addressed through the use of a compulsory three-year placement (*raspredelenie*) for all new medical graduates who were often sent to remote rural areas in other Soviet republics. Shortages in rural areas have led some governments, such as those of Belarus and Kyrgyzstan, to reintroduce these compulsory placements; in others, such

as Azerbaijan, the governments are discussing their reintroduction (Ibrahimov et al., 2010). In Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation and Tajikistan, financial incentives have been introduced to attract and retain staff to remote and rural areas.

Training

The training of health workers in most post-Soviet countries has retained many key features of the Soviet era system of medical education. Shortcomings of medical education in the Soviet period included over-specialization (well over a hundred very narrow clinical specializations were recognized), early specialization – with undergraduates' choice of medical faculty (usually medicine, paediatrics, public health, dentistry or pharmacy) determining the career path later available to them – and isolation from scientific developments in the west, in particular concepts of evidence-based medicine.

The focus on specialization at the expense of a solid grounding in general medicine also undermined the prestige of primary care relative to secondary or tertiary care work. Doctors could work at the primary care level or in hospitals with just a diploma and one year's internship (*internatura*) but many hospital doctors obtained a diploma, an internship of 2–3 years and specialist training (*ordinatura*). The above-mentioned practice of *raspredelenie* also contributed to the low prestige of primary health care, as new graduates were expected to work for three years in a compulsory placement (usually in primary care and often in remote and rural areas where attracting and retaining staff was particularly challenging) before being allowed to start specialist training. Post-Soviet reform efforts in the wider health system also highlighted gaps in the provision of training for health managers, the development of general practice or family medicine as a specialty and enhanced nursing training and practice. Indeed, relative to other aspects of the health system, many aspects of medical education have proved remarkably resilient.

At independence from the Soviet Union, all successor states inherited the capacity to train doctors and nurses. Currently, there is one university each that teaches undergraduate medicine in Azerbaijan, the Republic of Moldova, Tajikistan and Turkmenistan; four each in Belarus and Kyrgyzstan; five in Uzbekistan; six in Kazakhstan; 18 in Ukraine and 74 in the Russian Federation. These universities are all state-owned, although in Kazakhstan there is also one accredited private provider. In Azerbaijan there were several private medical universities in the 1990s but these were all closed by the Ministry of Education in 2005 when accreditation was introduced; similarly, in Kyrgyzstan the number of private medical universities fell from nine in 1991 to four in 2010

with the introduction of accreditation. In Georgia prior to independence, one medical university met the needs for training medical students. Deregulation of medical education in the 1990s led to a proliferation of providers of higher education; in 2004 there were 4 state and 69 private medical schools, for a population of around 4 million (Chanturidze et al., 2009). New accreditation processes reduced the number of providers but in 2006 there were still 34 medical universities in Georgia and the quality of training provided has been questioned (Oxford Policy Management, 2007).

However, the quality of medical education has also emerged as a concern among public sector providers. In the Russian Federation, for example, the quality of education has been undermined by faculty members accepting payments for passing courses (Geltzer, 2009). Similarly, the importance of fee-paying students as a source of funding for universities has led to students being allowed to study medicine with lower grades than would normally be expected. In order to overcome this, the Kazakh government has increased the number of medical scholarships available to students on a competitive basis. It has also placed great emphasis on improving the quality of medical training since 2005, through the re-equipping and renovation of facilities alongside the implementation of new educational standards (Katsaga et al., 2012).

In the Soviet system, the training of physicians took six years in the clinical (adult) medicine stream. In the fifth year, students further specialized into one of three sub-streams: internal medicine, surgery or gynaecology (*subordinatura*). The training was followed by a one-year internship before they were allowed to practise independently. Following internship, physicians began their three-year compulsory clinical placement (*raspredelenie*).

At present, undergraduate medical training lasts between four and seven years, depending on the stream in which the student has enrolled. For clinical medicine and paediatrics (which is now a single stream in Georgia, Kazakhstan, the Republic of Moldova and the Russian Federation), undergraduate training still takes six years. In Belarus further streaming (*subordinatura*) is also still a feature of the system. In Armenia, Kazakhstan and Tajikistan, which have sought to align their education systems with the Bologna process, medical training takes seven years before doctors can practise – five years at Bachelor's level, followed by two years at Master's level. In Uzbekistan, undergraduate studies take seven years, followed by two to three years of studies for a Master's degree. In Turkmenistan, there were serious concerns about the quality of medical training when the duration of training was reduced to two years; this has once again been increased to five years (Rechel, Sikorskaya & McKee, 2009).

Internships still take one year in Belarus but can take two or even three years in the Russian Federation, Kyrgyzstan and Ukraine. In some cases internships are rolled into specialist training, as is the case in Armenia, Georgia and Kazakhstan. In Uzbekistan, there is no formal internship, although the seventh year of undergraduate training is similar to an internship.

Doctors who do not specialize can work in primary care in all countries of the region (except the Republic of Moldova where a specialization in family medicine is required); however, most do specialize. Specialization usually takes 2–5 years but can be longer, depending on the specialization chosen. In Belarus, as it was in the Soviet Union, the normal career path after completing specialist training (*ordinatura*) is to become a narrow specialist in a polyclinic, before moving into a hospital, as physicians become more qualified (Richardson et al., 2013). This flow of specialists from primary to secondary care reinforces the common perception that those working in a primary care setting are not as good as doctors practising in hospitals.

All post-Soviet states have introduced reforms intended to usher in the transition to a family medicine model, or else to strengthen primary care, in order to bring it closer to the population and make it more person-centred (see Chapter 7). This shift has proved difficult (Rechel et al., 2013). One of the challenges is that the reputation of specialists is still vastly superior to that of generalists so that progress in training or retraining has been slow and primary care remains disease- and physician-centred rather than person-centred. Belarus has made the transition to family medicine only very recently. Elsewhere, the first physicians and nurses were trained in family medicine in the 1990s, often with help from donor organizations and foreign governments, as in Armenia, Azerbaijan, Kazakhstan, the Russian Federation and Tajikistan (Hakobyan et al., 2006; Holm-Hansen, 2009). In addition, Kazakhstan has invested considerable domestic resources (over US\$10 million in 2006–2008) into the training and retraining of primary care staff (Katsaga et al., 2012).

The progress made in building a primary care workforce varies between countries. In addition to training new graduates in family medicine, specialists in other disciplines underwent relatively short retraining courses to become GPs. A study in the Republic of Moldova found that 77% of doctors working in Family Medicine Centres had received retraining (Boerma et al., 2012). In Kazakhstan, only 19% of physicians working in primary care were trained as GPs in 2011 (Boerma et al., 2011), while in the Russian Federation, 18 500 primary care physicians (of a total of 70 000 nationwide) had been retrained in primary care by 2011 but there were still concerns about the level of training that physicians had received (Popovich et al., 2011). In Ukraine, problems were encountered in the application of retrained staff when parents were unwilling

for their children to be treated by a retrained physician who was not one of the old paediatricians (Lekhan, Rudy & Richardson, 2010). However, in recent years the country has stepped up efforts to train or retrain physicians in family medicine and to increase the attractiveness and salary levels of posts in family medicine.

The training of nurses in the Soviet Union reflected the relatively low status of nursing as a career. Training was conducted in vocational colleges and not in higher education facilities and nursing was not considered a profession. Nurse training took 18 months for students with general secondary education and 30 months for students with basic secondary education. This is still the format for nurse education in Belarus, Ukraine and the Russian Federation. In Uzbekistan the format remains the same but the course length has been extended to two or three years, depending on whether the student has completed secondary education. In Azerbaijan the duration of training has also been increased, to two years for nurses and three years for midwives and *feldshers*, in each case after completion of secondary education. In Tajikistan training takes four years but it is still considered vocational education so that nursing remains a job with low status and pay rather than being a profession. In Belarus, nursing is still a popular career option and courses are oversubscribed. However, elsewhere in the region, colleges are struggling to recruit students and in Georgia and the Russian Federation the imbalance in the number of doctors being trained relative to the number of nurses and other mid-level health personnel is very significant.

In Belarus, from 2009, a new category of health worker has been created – the doctor's assistant in primary care – to reduce the burden on primary care doctors and to help improve the quality of care for people with long-term conditions (Richardson et al., 2013). In many respects these are like 'nurse practitioners' but it is telling that there was strong resistance to labelling them as 'nurses' rather than 'doctor's assistants'. It is possible to do a degree in nursing in Georgia, Kyrgyzstan, Ukraine and Uzbekistan but the main problem is the lack of roles within the health system that can accommodate and acknowledge this professional training. Consequently, graduate nurses work in similar roles as colleagues with only diplomas and are paid no more for their qualifications (Lekhan, Rudy & Richardson, 2010). One of the key challenges in broadening the role of nurses in post-Soviet health systems is therefore agreement on task shifting. Traditionally, doctors have performed many tasks that professional nurses would perform elsewhere.

On paper, continuing professional development (CPD) for health workers is required but it is often not linked to revalidation or recertification, as the idea of licensing or registering doctors is relatively new. In Armenia, Belarus

and Uzbekistan, CPD consists of compulsory refresher courses held every five years at a central postgraduate training centre. In Kazakhstan, the Republic of Moldova, the Russian Federation and Ukraine, CPD has moved away from this model in favour of continuous medical education so that health workers gain credits for development activities and short courses on a five-year cycle rather than through one-off compulsory attendance at a refresher course. In Azerbaijan, all physicians (including dentists and pharmacists) and nurses are required to undergo a certification process every five years that includes a written test and an in-person interview. In Georgia the CPD system is not functioning and doctors are currently expected to self-fund most CPD activities. Some countries have also received support from international partners to develop CPD for health workers but the sustainability of CPD or retraining programmes provided through donor programmes or international NGOs is often limited, as they do not become institutionally embedded and financed through domestic resources. In Kyrgyzstan, continuous medical education is closely linked to quality improvement processes in facilities, such as the implementation of clinical guidelines; training is integrated across levels of care, rather than vertically organized.

Doctors' career paths

Doctors' career paths and, particularly, arrangements for promotion are among the aspects of human resources policy that have been most resistant to change. Indeed, all 12 countries considered in this volume have retained the Soviet model of 'attestation' linked to pay-scales, which is central to a doctor's career path. There are three promotion categories in attestation: Second, First and Higher and promotion from one to another is based on years of experience (in many countries over five years for Second, over seven years for First and over 10 years for Higher) and an examination set by a central expert committee; moving up through the grades is therefore not automatic and all promotions need to be applied for. In Armenia and the Republic of Moldova, however, continuous medical education points are also taken into account.

Attestation is voluntary but most doctors actively participate, as the categories are linked to pay awards. In Belarus facilities are incentivized to have as many highly qualified staff as possible and so are supportive of such career development. Retraining in extra specializations also boosts chances of promotion, as do academic postgraduate qualifications. Specialists with academic qualifications who also teach in a clinical setting are widely considered to be the most highly skilled and have the greatest earning potential – both formally and informally.

Doctors can also be promoted through the different levels in their institution to become heads of teams, departments and so on. Decisions about these

promotions are made at the local level and the chief doctor of a facility plays the main role in recruitment decisions and granting promotions within the institution. Such decision-making is, however, often lacking in transparency. Where direct payments to physicians constitute a significant source of revenue (such as in central Asia and the south Caucasus), this has warped some recruitment procedures so that in some instances physicians in essence ‘buy’ their posts from hospital managers on the understanding that they will earn this money back through direct payments for services. This practice has significant implications for reducing OOP payments in the system (be they formal or informal) as it further embeds inequitable practices. In theory recruitment for top posts is the responsibility of the health authorities of the corresponding level (national, regional or municipal) but the reality is often much less transparent.

Conclusion

While the Soviet Union prided itself on a very high concentration of doctors, more than 20 years after its dissolution some countries in the region are now facing shortages of doctors or nurses. Even where the number of doctors and nurses is sufficiently high, their distribution can be inequitable so that rural communities are underserved and the less glamorous or profitable specializations struggle to attract sufficient recruits. Growing population mobility, with the migration trends that result, also apply to the health workforce; this issue requires transnational cooperation between countries of origin and destination to ensure that poorer countries are able to maintain sufficient human resources for health. This is particularly urgent as changes to the training of health workers – which seek to converge with international standards – while important for ensuring the quality of medical education domestically, could also serve to facilitate international migration.

Attempts to reform the Soviet system of medical education, to broaden the responsibilities of nurses, make nursing a profession and create a cadre of family doctors and nurses, require systemic change in order to achieve their goals. The health workforce is a key resource in the health system but, so far, seems to have been more shaped by the system in which it is educated, employed and promoted rather than being change agents for further health reforms.

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Chapter 6

Public health

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Introduction

As mentioned in Chapter 2, the Soviet health system was successful in scaling up basic interventions, such as those against infectious diseases, but failed to tackle the growing challenge of noncommunicable diseases (McKee, 2007). This legacy is still felt in many post-Soviet countries today (Rechel et al., 2013), where an understanding of ‘new’ public health, as concerned with the main threats to population health, continues to be underdeveloped. Public health services in many countries of the region are more concerned with hygiene, sanitation and communicable disease control than with health promotion and intersectoral action for health. Indeed, many post-communist countries struggled with the very concept of ‘public health’ as the term was difficult to translate into national languages (Tragakes et al., 2008) – a challenge that is also faced by some countries in western Europe, such as Germany.

This chapter begins by considering the historical background of public health services in the post-Soviet countries. It then outlines the main organizational changes to public health services that have taken place since the countries gained independence. This is followed by a discussion of key aspects of public health, including financing of public health, health protection, disease prevention, health promotion and intersectoral action for health. A concluding section brings together the key findings of this chapter.

Historical background

In its early years, the Soviet Union paid great attention to the prevention of disease. Severe epidemics of infectious diseases such as typhus, cholera, smallpox, dysentery and malaria affected millions, with an estimated 6.5 million people contracting typhus in the period 1918–1920 alone (Glass,

1976). In response, a comprehensive network of public health centres in nearly every part of the country was set up. The mission and organization of this so-called Sanitary Epidemiological (san-epid) Service were first outlined in 1924 by N.A. Semashko, the first People's Commissar for Public Health, whose name also became associated with the overall Soviet health system. The san-epid service was charged with health protection, with a particular emphasis on communicable disease control through mass vaccinations and malaria surveillance, the sanitary control of water supplies, hygienic waste disposal and sewage, and the pasteurization of milk. In the 1950s and 1960s, the scope of the san-epid service was expanded to include occupational and environmental health, although, as exemplified by such environmental disasters as the pollution of the Lake Baikal, in the latter role it remained largely ineffective (Glass, 1976).

The network was expanded rapidly and by 1941 about 1760 san-epid stations had been established, increasing to 4800 stations (3000 of which were in rural areas) by 1976, employing more than 37 000 specially trained physicians (Glass, 1976). The service was organized in a hierarchical, top-down manner, headed by the chief health officer of the country who was also Deputy Minister of Health. It was represented at all administrative levels with subdivisions at republican, *oblast*, city and *rayon* level. The san-epid system also had a number of central research institutes and maintained a network of laboratories. While officials at the national level were responsible for overseeing and coordinating the service, the stations at *rayon* level were charged with local surveillance and control of communicable diseases, food and water safety, and the enforcement of sanitary-hygienic regulations. The service was separate from curative health services and its staff had no clinical contact with patients (Glass, 1976; Maier & Martin-Moreno, 2011).

Although the san-epid service initially made huge progress fighting communicable diseases, establishing comprehensive childhood vaccination programmes and contributing to the decline of many communicable diseases, it was much less effective in the areas of noncommunicable disease, occupational health and environmental health, while health promotion and intersectoral action were largely neglected (Maier & Martin-Moreno, 2011). In many post-Soviet countries the first years of independence saw a deterioration of public health structures and a resurgence of infectious diseases such as diphtheria, sexually transmitted infections and tuberculosis. In Georgia, for example, immunization services almost ceased entirely in the early 1990s (Chanturidze et al., 2009). Furthermore, new challenges emerged in the post-Soviet period in the form of a rapidly growing HIV/AIDS epidemic and the emergence of drug-resistant and extensively drug-resistant TB (Rechel et al., 2013), while the

previously neglected non-communicable diseases were only slowly recognized as major health challenges (see Chapter 2). In this context, the first reforms of public health systems started in the post-Soviet countries in the early 1990s and many have faced substantial challenges, with limited funding, shortages of skilled staff and little exposure to modern concepts of public health. As a consequence, a systematic assessment of performance in implementing public health policies found that they lagged far behind western Europe (Mackenbach & McKee, 2013).

Organization

Departing from a similar starting point at independence, the post-Soviet countries embarked on different types of reform (Maier & Martin-Moreno, 2011). Some (including Armenia, Belarus, the Russian Federation and Ukraine) have largely preserved the san-epid structure inherited from the Soviet period; some (including Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan) have built additional structures; and others (in particular Georgia and the Republic of Moldova) abandoned the san-epid service and set up new public health infrastructures.

Armenia, Belarus, the Russian Federation and Ukraine concentrated reform efforts on traditional san-epid functions, with a continued focus on communicable disease control and enforcement of sanitary controls. In Armenia, the san-epid service was reorganized in 2002 into the State Hygiene and Anti-Epidemic Inspectorate under the Ministry of Health. The focus, however, remained similar to that of the preceding san-epid service. Although non-communicable diseases were added to its responsibilities, the emphasis remains on the control of communicable diseases (Richardson, 2013). Belarus too has broadened the remit of san-epid services to include health promotion and education (Maier & Martin-Moreno, 2011; Richardson et al., 2013). In the Russian Federation, a new agency – the Federal Consumer Right Protection and Human Wellbeing Surveillance Service (*Rospotrebnadzor*) – was created in 2004, merging the Sanitary-Epidemiological Inspectorate with the State Inspectorate for Trade, Quality of Goods and Protection of Consumer Rights, which from 1993 was responsible for certain public health functions such as food safety (Popovich et al., 2011). Responsibility for health promotion and health education was thus removed from the centres for hygiene and epidemiology, reinforcing the focus of the san-epid system on communicable disease control. While there is no single national body in charge of coordinating the monitoring and prevention of noncommunicable diseases, a network of preventive health centres was set up in 2010 charged with promoting healthy lifestyles (see below) (Popovich et

al., 2011). In Ukraine, the san-epid service underwent major reforms in 2011–2012. Its status was upgraded from a structure within the Ministry of Health to a central executive body under the Cabinet of Ministers and its emphasis was shifted from administrative services to health promotion and education. The number of institutions and units managed by the san-epid service was almost halved and the number of staff decreased by more than 40%. The reform expanded the tasks of the service to include the prevention of tobacco use, reduced the number and frequency of planned inspections and simplified licensing procedures.

Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan have gone further, setting up new structures to complement san-epid systems. In Azerbaijan, the san-epid service continues to focus on the surveillance of infectious diseases and the supervision of the immunization programme. However, in 2007 the Public Health and Reform Centre was established – including a Department of Health Communication and Public Relations – charged with health promotion activities (Ibrahimov et al., 2010). In Kazakhstan, in the 1990s, all local san-epid subdivisions were placed under the control of local executive bodies, leading to a lack of clarity about institutional roles and responsibilities, weak management, and lack of coordination. In 2007–2008, however, the san-epid service was restored to its previous vertical structure (Katsaga et al., 2012). Kazakhstan has also set up a new vertical structure of healthy lifestyle centres, headed by the National Centre for Healthy Lifestyles. Kyrgyzstan too has established a separate organization to deal with health promotion, the Republican Health Promotion Centre (Ibraimova et al., 2011), while in Tajikistan a Republican Centre for Healthy Lifestyles and an Institute of Preventive Medicine were created (Khodjamurodov & Rechel, 2010). In Uzbekistan, the san-epid service continues to be responsible for communicable disease control, food safety and environmental health. San-epid stations at local level are also responsible for health education for pregnant women and in schools, with a focus on infectious diseases, vaccination and nutrition. The Institute of Health was established in 2001 and was envisaged to be the main national player in health promotion and education (Ahmedov et al., 2007).

The Republic of Moldova began a radical reform of public health services in 2010 with the aim of transforming the inherited san-epid services into a broader public health service better equipped to deal with major population health challenges. The new State Surveillance of Public Health Service has retained the communicable disease control functions but more emphasis has been placed on noncommunicable disease control, health promotion and disease prevention (Turcanu et al., 2012). Reforms of public health services went furthest in Georgia, which completely reorganized its san-epid structures. However, the

high speed of reforms, the privatization of some public health functions and the unclear lines of responsibility following decentralization of public health services led to problems in communicable disease control (Chanturidze et al., 2009; Maier & Martin-Moreno, 2011).

The traditional san-epid service inherited from the Soviet period has thus shown great resilience to change. Some other aspects of the Soviet organization of public health services have also remained in place. In several countries, including the Republic of Moldova, the Russian Federation and Tajikistan, the head of the san-epid service continues to be the Chief Sanitary Doctor and Deputy Minister of Health (Khodjamurodov & Rechel, 2010; Popovich et al., 2011; Turcanu et al., 2012). Most countries (including Armenia, Belarus, Kazakhstan, Kyrgyzstan, Tajikistan, Ukraine and Uzbekistan) have also retained a separate body inherited from the Soviet era to ensure the sanitary-epidemiological safety of the population, specifically in terms of food and water safety, occupational health and immunization, under the overall responsibility of the Ministry of Health. Again, Georgia is an exception, where epidemiological surveillance and environmental health were separated and the Ministry of Health no longer monitored food, water and air quality, although it retained responsibility for standard setting (Gotsadze et al., 2010).

In all countries in Europe, a number of actors are involved in public health activities and their integration can be challenging (Rechel, Brand & McKee, 2014). In the post-Soviet countries, new actors have emerged since independence, including NGOs, professional and patient associations and international agencies. NGOs, many with funding from international agencies, are of particular relevance in some areas neglected by official public health services, such as in HIV/AIDS prevention efforts involving harm reduction measures targeting injecting drug users and sex workers (Gotsadze et al., 2010; Ancker & Rechel, 2013; Pape, 2013).

The existence of separate vertical public health structures poses a particular challenge to integration and can lead to the fragmentation and duplication of services (Tkatchenko, McKee & Tsouros, 2000). In addition to the san-epid service, in many countries there are separate vertical structures for TB and HIV/AIDS. In Kazakhstan an additional network of diabetes centres has been established (Katsaga et al., 2012). In some countries, the situation is further complicated by the continued existence of parallel public health structures, such as the network of centres of hygiene and epidemiology for the railway network in the Russian Federation (Popovich et al., 2011) and Ukraine. Finally, the primary health care sector is the setting of key public health functions, such as the provision of immunizations and, increasingly, health promotion and education (see below).

The poor integration of separate vertical public health structures and primary health care has been identified as a challenge in a number of countries, including Azerbaijan (Ibrahimov et al., 2010), Belarus (Richardson et al., 2013), Kazakhstan (Katsaga et al., 2012), Tajikistan (Khodjamurodov & Rechel, 2010) and Ukraine. Poor integration of public health activities was also noted as a particular problem in Armenia. In that country, more than half a dozen government ministries and many state agencies have a substantial role in public health, while the Ministry of Health covers only some public health services. In addition, some public health activities are provided by international organizations and national NGOs. There is no overriding central state authority responsible for the integration, coordination and oversight of all public health authorities in Armenia (Armenian et al., 2009) or Ukraine. In Azerbaijan, tensions exist between the san-epid service and primary health care; primary care physicians are, for example, required to notify even mild cases of diarrhoea but hardly any of them do (Ibrahimov et al., 2010). In the Russian Federation, limited coordination of preventive activities within the health sector has been described, with preventive and curative services organized as two separate systems and little integration of preventive activities into primary health care (Axelsson & Bihari-Axelsson, 2005).

Financing

In almost all post-Soviet countries, the central budget is the only source of government funding for public health services. In both Georgia and Ukraine, the responsibility for funding major public health functions was shifted in the 1990s to local municipalities. However, as major inequalities between poorer and wealthier areas emerged, financing was again centralized in both countries (Gotsadze et al., 2010). In several former Soviet countries, including Armenia, Kyrgyzstan and Tajikistan, charges for public health inspections have been introduced, with uncertain consequences (Durán & Kutzin, 2010). In Tajikistan, about 80% of the income of the san-epid system now comes from the provision of paid services (Khodjamurodov & Rechel, 2010). The scope for corruption in countries with weak regulatory and governance systems is clear.

Not enough is known about the total level of financing for public health in the post-Soviet countries. Although this could also be said about many countries in western Europe, national health accounts data on the percentage of total health expenditure devoted to prevention and public health services give a good approximation of expenditure on public health (Rechel, Brand & McKee, 2013). Such data are only available for 7 of the 12 post-Soviet countries considered in this volume, with large gaps across years (Table 6.1). Expenditure

Table 6.1 *Prevention and public health services as a percentage of total health expenditure, 2001–2011*

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Armenia	–	0.7	0.6	0.9	3.9	5.2	3.9	4.5	4.7	–	–
Belarus	–	–	–	–	–	–	–	–	–	3.8	3.9
Georgia	1.7	3.1	2.2	2.3	1.8	1.1	1.2	0.6	1.2	1.3	1.5
Kyrgyzstan	–	–	–	2.2	–	2.3	2.8	4.4	3.8	3.6	2.9
Republic of Moldova	–	–	–	–	–	–	–	–	4.4	7.6	–
Tajikistan	1.5	0.9	0.9	0.9	1.3	–	2.2	3.0	2.8	2.8	5.1
Ukraine	–	–	3.7	3.7	3.5	3.7	3.5	3.4	3.1	3.2	2.8

Source: WHO, 2014.

as a share of total health expenditure was lowest in Georgia, amounting to only 1.5% in 2011. Of the remaining five post-Soviet countries, low levels of expenditure on public health were also noted in Kazakhstan, where in 2008 only 0.2% of public expenditure on health was devoted to health promotion and disease prevention (Katsaga et al., 2012).

Health protection

Health protection has been a traditional mandate of san-epid services and continues to be so in most post-Soviet countries. As mentioned above, public health services continue to be charged with food and water safety, hygiene-related measures and control, environmental health regulations and occupational health (Maier & Martin-Moreno, 2011). However, as in the Soviet period, they often continue to rely on control mechanisms and sanctions, identifying and punishing breaches of sanitary legislation, as was noted, for example, in Belarus (Richardson et al., 2013), rather than pursuing preventive approaches, such as environmental health assessments (Maier & Martin-Moreno, 2011). The reliance on charges for public health inspections as a source of income for public health services in some of the former Soviet countries (see above) tends to reinforce the prevailing control and sanctions approach, and creates scope for corruption.

Environmental health

In the area of environmental health, the Soviet Union witnessed some spectacular failures, such as the desertification of the Aral Sea, the fallout from above-ground nuclear tests at Semipalatinsk between 1949 and 1962, and the 1986 Chernobyl disaster, which were indicative of the primacy given to industrial and military development and the neglect of the environment and (consequently) health. In the post-Soviet period, governments were primarily

concerned with the establishment of market economies, economic recovery and reducing poverty levels, and environmental protection and sustainability were again low in the list of priorities (Agyeman & Ogneva-Himmelberger, 2009). While a great number of NGOs have emerged that aim to protect the environment (Profeta et al., 2010), in some cases supported by international agencies, government involvement and leadership has generally been lacking. Environmental health regulations, even where they exist, do not tend to be implemented in practice, partly due to weak judicial systems (Agyeman & Ogneva-Himmelberger, 2009). Lack of democracy in the more authoritarian countries of the region is another reason for the neglect of environmental health (Rechel & McKee, 2005).

There are many areas of concern. Industrial oil development in countries such as Azerbaijan, Kazakhstan and the Russian Federation has been generally characterized by limited involvement of local communities and a disregard for environmental sustainability and justice (Agyeman & Ogneva-Himmelberger, 2009). Air pollution decreased in the early years after the dissolution of the Soviet Union but this was largely due to a fall in industrial production rather than more stringent environmental policies. The increase in motor vehicles since then has led to increasing air pollution in major cities in recent years and further increases are expected in coming years (Åström, 2013). The use of asbestos is still widespread and the Russian Federation, the world's biggest producer, is resisting a worldwide ban (Stayner, Welch & Lemen, 2013).

Another area of concern is access to safe drinking water, which is a particular challenge for the poorer countries in central Asia. Tajikistan, for example, is one of the richest countries worldwide in terms of water resources per head, but in 2000 could only supply 59% of its population with safe drinking water (Khodjamurodov & Rechel, 2010). Proper water and sanitation facilities are also lacking in many schools and health facilities in rural areas (Roberts et al., 2012b). These deficiencies in water and sanitation services increase the risks of waterborne diseases, such as typhoid, giardia, rotavirus and campylobacter, and undermine food safety (Khodjamurodov & Rechel, 2010).

Occupational health

In the Soviet period, occupational health services were delivered through the san-epid network. In the years since independence, occupational health and safety programmes and structures were generally undermined by a lack of transparency and accountability, the absence of a genuine social dialogue and indiscriminate privatization of public services (Kim et al., 2014). The scale of occupational fatalities and injuries is so extensive that they cost Russian employers on average 10–15% of their payrolls (Fudge & Owens,

2006). However, there is substantial underreporting of non-fatal work-related injuries and accidents, especially in small and medium-sized enterprises and the informal economy. The situation is further aggravated in those countries that have retained the outdated system of compensation for work in hazardous working conditions ('hazard pay'), which does not encourage employers to improve working conditions (Kim et al., 2014).

There have, however, also been some positive developments. With the support of the International Labour Organization (ILO), most countries in the region have prepared national profiles analysing their national occupational safety and health systems and prepared programmes for improvement (Kim et al., 2014). Kazakhstan, for example, has adopted an occupational safety and health programme, while Kyrgyzstan and Tajikistan have signed tripartite general agreements that include consideration of occupational safety and health issues. In Azerbaijan, the government has pledged to modernize labour inspection and occupational safety and health (Kim et al., 2014). In contrast, in Georgia, the government terminated all occupational safety and health-related inspection services and abolished minimum safety requirements. After a number of serious workplace accidents, employers and trade unions voluntarily set up an occupational safety and health centre and agreed to start implementing ILO recommendations for occupational safety and health management systems without involvement of the government (Kim et al., 2014).

Disease prevention

The prevention of infectious diseases through vaccination was one of the main strengths of the san-epid services and this strength, after disruptions in the early 1990s, has to a large degree been maintained, with very high vaccination rates persisting in most countries (Maier et al., 2009; Maier & Martin-Moreno, 2011). However, there continue to be great problems in addressing more complex communicable diseases, most notably HIV/AIDS and TB, with poorly integrated vertical structures, whereas in western European countries services are more often integrated into mainstream health-care provision. Furthermore, early detection and prevention of noncommunicable diseases were virtually lacking in the Soviet era and remain underdeveloped (Maier & Martin-Moreno, 2011). This particularly applies to primary prevention of disease, such as through health policy measures against alcohol or tobacco consumption (see below).

Paradoxically, preventive medicine was considered a key strength of the Semashko system (Richardson et al., 2013) yet this largely relied on a medicalized approach to prevention, with an emphasis on routine medical

check-ups (Tulchinsky & Varavikova, 1996). Enthusiasm for these preventive health examinations grew in the mid-1980s (Lekhan, Rudić & Richardson, 2010). The focus was on secondary prevention, aiming to detect diseases through a large number of often ineffective screening initiatives, rather than on primary prevention of noncommunicable diseases (Richardson et al., 2008; Gotsadze et al., 2010).

In a number of countries of the region, such as Belarus (Richardson et al., 2008, 2013), this approach has been reinstated. In Belarus, nearly all main specialties have initiated elaborate screening programmes. All adults visiting primary care doctors are screened for hypertension and all women for breast cancer. Some of the screening programmes, however, are of questionable efficacy, such as the opportunistic annual electrocardiogram (ECG) screening for all patients over 40 years of age (Richardson et al., 2013). In Ukraine mass screenings were resumed in the early 2000s. Certain groups of the population (such as children, pregnant women, teenagers and students) have to undergo compulsory medical screenings, while the rest of the population is expected to undergo regular prophylactic examinations (Lekhan, Rudić & Richardson, 2010). In the Russian Federation the sections of the population expected to undergo periodic health checks (*dispansertizatsiya*) at primary care level are too large (Popovich et al., 2011). In the Republic of Moldova norms for annual preventive check-ups were adopted by the Ministry of Health in 2008. According to these norms, check-ups should include an examination of lymph nodes, breasts and thyroid gland, a gynaecological and rectal examination, measurement of blood pressure, intraocular pressure and electrocardiography, as well as biological tests (Turcanu et al., 2012). In Armenia the Ministry of Health recommends that all adults undergo a preventive health examination at least once a year, including checks for high blood pressure, diabetes and lung diseases (Richardson, 2013).

While these initiatives are evidence of the political will of decision-makers to detect and treat diseases, some of the existing extensive screening programmes are not based on sound evidence and many lack qualified staff to implement them effectively (Maier & Martin-Moreno, 2011). There is also a serious danger of over-diagnosis, as different specialties seek to justify their involvement, status and income (Rechel et al., 2011). Furthermore, an opportunistic approach to screening, offering it to those attending primary health care or to those patients who request it, is inferior to organized screening based on a defined target population, central organization and planning, systematic monitoring of uptake by different groups within the population, evidence-based screening intervals, and quality assurance systems (McKee & Rechel, 2014). In many post-Soviet countries, progress in implementing well-organized screening, incorporating

comprehensive quality assurance, has been particularly slow (Maier & Martin-Moreno, 2011; McKee & Rechel, 2014). Cancer screening programmes in the Republic of Moldova, the Russian Federation and Ukraine, for example, are opportunistic and lack overall coordination (Lekhan, Rudyi & Richardson, 2010; Popovich et al., 2011; Turcanu et al., 2012), while in Georgia national screening programmes for cervical and breast cancer are missing altogether. Belarus is an exception and its organized cervical cancer screening programme is reported to cover almost 90% of the female population (Richardson et al., 2013). The lack of organized screening programmes in many of the other post-Soviet countries means that they have little impact on morbidity and mortality (Kesic, Poljak & Rogovskaya, 2012). The high mortality rates for cancer in many countries of the former Soviet Union are likely to be attributable, at least in part, to the absence of organized screening programmes (Kesic, Poljak & Rogovskaya, 2012; Anttila & Martin-Moreno, 2013).

Health promotion

In the Soviet period, health promotion was largely neglected (WHO, 2009; Maier & Martin-Moreno, 2011; Saltman et al., 2012). Even now, health promotion continues to be one of the most underdeveloped and underfinanced domains of public health in many post-Soviet countries (Maier et al., 2009). Public health services in many countries continue to be more concerned with hygiene, sanitation and traditional methods of communicable disease control.

While health promotion continues to be underdeveloped, there are attempts to overcome this legacy. As mentioned above, many post-Soviet countries have either enlarged the remit of existing public health systems to include health promotion or established new health promotion structures (Maier & Martin-Moreno, 2011). In Azerbaijan the san-epid service is now formally responsible for promoting healthy lifestyles, although its role is limited to the distribution of health posters in health facilities (Ibrahimov et al., 2010). The Public Health and Reform Centre was established in 2007 and is charged with health communication activities (Ibrahimov et al., 2010). In Kazakhstan, a wide-ranging programme to encourage healthy lifestyles has been initiated, led by the National Centre for Healthy Lifestyles, established in 1997 (Katsaga et al., 2012). The centre has been a key actor in the development of national and regional programmes for the promotion of healthy lifestyles and has regional subdivisions throughout the country. In Kyrgyzstan, a Republican Centre for Health Promotion was established in 2001 and charged with providing health promotion, health education and communication activities; there are health promotion centres in the capital Bishkek, in the north, and the southern city of

Osh (Ibraimova et al., 2011). In the Russian Federation, a network of preventive health centres was set up in 2010 – linked to regional and municipal primary care facilities – with the aim of raising awareness and promoting healthy lifestyles. However, at least initially, attendance at these centres was low (Popovich et al., 2011). In Ukraine, health centres to coordinate the promotion of healthy lifestyles are envisaged but by 2010 had not yet been established (Lekhan, Rudi & Richardson, 2010). However, the country participates in several international health promotion networks, such as those on health-promoting schools, youth-friendly clinics, and child-friendly hospitals. In Uzbekistan, health promotion, mainly consisting of the dissemination of information on public health issues, was entrusted to the Institute of Health and Medical Statistics (Ahmedov et al., 2007; Ministry of Health of the Republic of Uzbekistan, 2011).

Many countries of the region have also adopted national programmes for the promotion of healthy lifestyles. In Belarus, for example, a state programme to promote healthy lifestyles and another for the prevention of hazardous alcohol consumption have been established (Maier & Martin-Moreno, 2011; Richardson et al., 2013). Kazakhstan has set up both national and regional programmes for the prevention of alcohol and tobacco consumption and the promotion of physical activity and healthy nutrition (Katsaga et al., 2012). In the Republic of Moldova, national programmes on tobacco and alcohol control were launched in 2012, followed by nationwide communication campaigns. There is also a national programme for the promotion of healthy lifestyles but the programme is underfinanced and its activities are unsystematic (Turcanu et al., 2012). Tajikistan adopted a national programme for healthy lifestyles in 2003 (Khodjamurodov & Rechel, 2010).

As mentioned above, primary health care is gaining in importance as a setting for health promotion and education. In Armenia, the majority of health promotion activities are provided by primary care services, under the coordination of the Department of Public Health (Richardson, 2013). In Kazakhstan, the National Centre for Healthy Lifestyles works with *oblast* and city health departments to increase the role and capacity of primary health care in health promotion (Katsaga et al., 2012). In Kyrgyzstan, at *oblast*, *rayon* and city level, health promotion rooms were set up in family medicine practices, with the aim of integrating health promotion into primary health care (Ibraimova et al., 2011). In countries such as Kyrgyzstan and Tajikistan, community health workers are key frontline providers of public health services, including health promotion. In addition to helping to improve the health of the population, their work contributes to raising awareness and competences for public health, health promotion, disease prevention and health protection at the community level (Ibraimova et al., 2011; Maier & Martin-Moreno, 2011; Khodjamurodov &

Rechel, 2010). In Uzbekistan, most primary health-care providers are involved in some form of health promotion or health education (Ahmedov et al., 2007).

There are also many NGOs and international agencies engaged in health promotion activities in the post-Soviet countries. In Armenia, for example, there are few state-sponsored health promotion activities, due to limited financial and human resources as well as poorly defined roles and responsibilities, and health promotion is most commonly conducted by international agencies, often on a sporadic and short-term basis (Armenian et al., 2009). In Kyrgyzstan, on the other hand, there is a range of health promotion initiatives organized by village health committees. These committees have been set up in more than 780 villages, with the participation of approximately 20 000 volunteers. They agree health priorities for each of the villages and pursue concrete activities to address them (Ibraimova et al., 2011; Maier & Martin-Moreno, 2011). In the Republic of Moldova, 1% of the total fund of the National Health Insurance Company is devoted to health promotion activities, which are implemented by government organizations and NGOs on a competitive basis.

Finally, schools have become settings for health promotion activities as health education has been reintroduced in schools in many countries, including Armenia, the Russian Federation and Tajikistan. In Uzbekistan, for example, a health promotion curriculum was developed in the early 2000s and subsequently rolled out nationwide, covering reproductive health, drug addiction and infectious disease (Ahmedov et al., 2007).

Intersectoral action

Intersectoral action for health is perhaps the most underdeveloped function of public health in the region, due to a prevailing view of health as the responsibility of the health sector (Maier & Martin-Moreno, 2011). A study in the Russian Federation, for example, found that there is only limited intersectoral collaboration between the health sector and the social insurance system, as well as other sectors of society (Axelsson & Bihari-Axelsson, 2005). Health impact assessments, through which the potential health consequences of policies inside and outside the health sector could be identified, are not yet routine practice in most post-Soviet countries.

However, the importance of intersectoral action is increasingly being recognized. A number of national health policy documents have now formally embraced the need for a comprehensive intersectoral approach, including in Kazakhstan (Katsaga et al., 2012), the Republic of Moldova (Turcanu et al., 2012) and Ukraine (Lekhan, Rudiy & Richardson, 2010). The challenge is mainly one of implementation.

Some countries have also set up intersectoral governance mechanisms, such as multisectoral coordination committees in the area of HIV/AIDS. In Armenia intersectoral working groups have contributed to the processes of agreeing some pieces of legislation (Maier & Martin-Moreno, 2011). Kyrgyzstan has established an intersectoral public health coordination council at the district level to strengthen collaboration between professional associations, the education sector, NGOs and volunteers from the village health committees (Maier & Martin-Moreno, 2011). In the Republic of Moldova, an Interdepartmental Commission to Fight Drug Use and the Narco-business has been set up (Turcanu et al., 2012), as well as National Coordination Councils for Tobacco and Alcohol Control.

There are also examples of intersectoral working between different ministries without any formal structures for doing so. In Armenia, for example, the Ministry of Agriculture and the Ministry of Health work in close collaboration in the area of pandemic influenza preparedness (Richardson, 2013). In some countries, ministries of labour and health (and in some cases environment and emergency response) cooperate to improve occupational health and safety (Kim et al., 2014).

Sometimes, the involvement of international agencies has triggered multisectoral collaboration. In the areas of HIV/AIDS and TB, one of the conditions imposed by the Global Fund to Fight AIDS, Tuberculosis and Malaria was the establishment of a country-coordinating mechanism at national level. In Kyrgyzstan, Tajikistan and Uzbekistan, international agencies support activities to improve nutrition, in particular the prevention of micronutrient deficiencies and this also generally involves multisectoral collaboration (Ahmedov et al., 2007; Khodjamurodov & Rechel, 2010; Ibraimova et al., 2011). The inclusion of health education in school curricula (mentioned above) is another area of intersectoral work, sometimes supported by external agencies.

The prevention of accidents and injuries is another area in which the need for intersectoral collaboration is evident and where the policy response has long been very weak (McKee et al., 2000). Road traffic safety, for example, is a major concern. In the Russian Federation alone, there were nearly 30 000 road traffic deaths and about 271 000 non-fatal road traffic injuries in 2008, with death rates far in excess of the EU average (Marquez & Bliss, 2008). Another area of intervention relates to falls within houses. In the Russian Federation, Kyrgyzstan and Belarus, children are 22 times more likely to die from a fall than children in the European countries with the lowest mortality rates i.e. Sweden, the Netherlands and the United Kingdom. One major reason for these differences is housing – the countries with lower mortality rates have improved stair design and safe window design (WHO, 2008).

Finally, intersectoral action is required to address the pre-eminent risk factors for morbidity and mortality in the region – tobacco and alcohol consumption (World Bank, 2010; Smith & Nguyen, 2013). Population-based measures, such as tax increases on alcohol and tobacco and smoking bans in public places, will be particularly important and can build on popular support for stronger anti-tobacco and anti-alcohol policies (Roberts et al., 2012a; Smith & Nguyen, 2013). As mentioned in Chapter 2, all post-Soviet countries have become parties to the WHO Framework Convention on Tobacco Control and have started to implement tobacco advertising restrictions, product warnings and labelling, smoking bans, awareness raising campaigns and some tax increases on tobacco products (WHO, 2011) but there is still a long way to go (Mir et al., 2012).

Conclusion

The health crisis engulfing the post-Soviet countries calls for a strong and comprehensive public health response. So far, however, this response is still mostly lacking, particularly with regard to the prevention of noncommunicable diseases and injuries.

Reforms of public health services in the former Soviet countries have lagged behind those in other parts of the health system (Maier et al., 2009) but many have now started to reorient their public health structures, either broadening the remit of the traditional san-epid services or setting up new structures, such as for the promotion of healthy lifestyles. However, sometimes these new structures are not adequately financed and staffed and there are challenges of integration and strengthening the capacity of primary health care to deliver public health functions.

Health protection has been a traditional focus of san-epid services but major challenges remain with regard to the frequent neglect of environmental health and the task of strengthening occupational health in a liberalized environment with widespread informal markets. Disease prevention has been another traditional concern of public health services but the focus remains on communicable disease control, and large-scale screening activities in some countries are not always based on sound evidence, may not reach those at greatest risk and could waste precious resources and good will. Health promotion is still underdeveloped but is now gaining increasing attention in a range of settings. Finally, intersectoral action is often confined to a few policy areas and the health impact of policies is often not considered. It will not be possible to address the health crisis in the post-Soviet countries without stepping up public health action, in particular in the areas of alcohol and tobacco consumption and the prevention of accidents and injuries.

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Chapter 7

Primary health care

Charlotte Kühlbrandt

Introduction

The Alma-Ata conference in 1978 placed primary health care high on the international agenda as a means of strengthening health systems, particularly in low- and middle-income countries (WHO, 2008). This chapter examines key aspects of primary health care in the countries of the former Soviet Union, including settings and models of care, patient choice and gatekeeping, and accessibility. It begins by giving a brief historical overview of how primary care evolved in the Soviet Union.

Historical background

The primary health care model inherited in 1991 by the newly independent former Soviet countries was based on the centrally planned and hierarchically organized Semashko system. In rural areas, primary care services were provided at rural health clinics and *feldsher*–midwife points (FAPs), while in urban areas they were provided at polyclinics. Indeed, primary health care was one of the strengths of the early Soviet health system, enabling the great majority of the population, in both cities and rural areas, to gain access to basic health services. However, after the Second World War, health policy increasingly focused on secondary and tertiary care, leading to a neglect of primary care and rural areas. Referral systems, financial flows and the physical infrastructure all favoured large urban hospitals and secondary care (Borowitz et al., 1999).

Another challenge was that the gatekeeping function of primary health care was not properly established and patients could easily self-refer to many specialists (Holm-Hansen, 2009). Apart from this, however, there was little choice; patients were allocated to a health professional and had little say in their treatment (World Bank, 2005a). Parallel health systems for employees

of certain ministries and large state companies exacerbated inefficiencies (see Chapter 3). Primary care was further fragmented by the existence of vertical disease management programmes and there were often separate facilities for adults, women (for reproductive health services) and children.

There was no specific training for primary care specialists, so that *terapevt* (primary care internist) or *pediatr* (primary care paediatrician) were physicians working in primary care but without relevant advanced medical education. The state achieved comprehensive primary care coverage in rural areas through the obligatory placement (*raspredelenie*) of new graduates in posts throughout the country, giving them little or no choice as to where in the Soviet Union they would be practising. Although not trained in general practice or family medicine, these physicians were de facto working as family doctors. In urban areas the situation was quite the opposite: partly because there were no financial incentives for primary care physicians to treat patients, and partly because of population preferences, conditions that would elsewhere be treated at the primary level were referred straight to specialists in polyclinics or hospitals (Rechel et al., 2013). Because primary care tasks were frequently provided by specialists in different polyclinics, primary care physicians were often no more than ‘dispatchers’ in the system. They were poorly paid, had limited access to equipment or medicines and had very little say over organizational aspects of the health system. Under these circumstances, it was almost impossible for primary care to be either comprehensive or continuous (Langenbrunner, Cashin & O’Dougherty, 2009).

Reform trajectories

After the break-up of the Soviet Union, the newly independent states endeavoured without exception to strengthen their primary care sectors (Table 7.1). The nature and extent of these reforms, however, has varied between countries. All the states have been struggling to increase cost–effectiveness and improve outcomes but with mixed results (Boerma et al., 2012).

Strengthening primary health care has also been a firmly established policy goal for international institutions working in the former Soviet countries, including WHO and the World Bank, but also bilateral agencies such as the United States Agency for International Development (USAID). These international organizations have promoted a model of primary health care delivery based on the specialties of general practice or family medicine. This approach (referred to as the ‘family medicine model’ throughout this chapter) seeks to increase the role of first-access ambulatory care, providing the majority of health services for all patients and acting as a gatekeeper to secondary and tertiary care. The

overall aim is to reduce utilization of hospital and specialist services, increase the technical efficiency of health systems, provide better access to the population and improve the equity of health service provision (Atun, 2004).

These goals have been embraced by all 12 countries, acknowledging that the establishment of good-quality primary care should be a priority for reform and spending (Smith & Nguyen, 2013). While this has not always translated into the realities of budget allocations, where secondary and tertiary care providers have greater lobbying powers, and where hospitals still receive the lion's share of the health budget (Kulzhanov & Rechel, 2007; Belli, 2003), most former Soviet governments have been slowly introducing policies to shift health systems towards the family medicine model (Rechel & McKee, 2009).

As this chapter will demonstrate, this transition has not been completed in any of these 12 countries, and has been a slow process everywhere. This hesitant pace of reforms reflects the political, economic and social challenges that accompany the fundamental restructuring of health systems. Currently, family medicine is more common in rural areas where patients are geographically bound to their primary care providers and cannot easily self-refer to specialists. In many former Soviet countries elements of family medicine have been introduced in pilot regions (Rechel et al., 2013), such as the Chuvash region in the Russian Federation (Popovich et al., 2011). Two notable exceptions to this very partial implementation of family medicine are the Republic of Moldova and Kyrgyzstan (World Bank, 2005b; Ibraimova et al., 2011; Rechel et al., 2013), where Soviet primary care facilities have been fully transformed into family medicine centres and the gatekeeping function of primary care is operational. The Armenian government was one of the first in the former Soviet Union to introduce family medicine but it is still not fully implemented. This incremental approach to reforms in most countries of the region has resulted in primary care provision that is often characterized by an uneasy and ill-functioning alliance between elements of the Semashko system and reformed approaches in line with family medicine (Table 7.1).

Current settings and models of primary care

Since gaining independence in 1991, the foundation structures for the provision of primary care have not changed substantially in Azerbaijan, Belarus, Kazakhstan, the Russian Federation and Turkmenistan, where the structure of primary care is still largely based on the old Semashko system. In Georgia, Kyrgyzstan, the Republic of Moldova, Tajikistan, Ukraine and Uzbekistan far-reaching reforms to the general settings and models of primary care have been initiated.

Table 7.1 *Introduction of general practice/family medicine and the current status of reform*

	Introduction of the specialty of general practice/family medicine	Current status of reform
Armenia	1993	Family medicine fully introduced; implementation difficult; polyclinics prevail in urban areas
Azerbaijan	2008	Government considers family medicine the future of ambulatory care
Belarus	1991	GPs widely accepted only in rural areas
Georgia	1997	Staffing of primary health-care facilities is diverse, with a mixture of family doctors, generalist physicians and narrow specialists
Kazakhstan	2004	Small numbers of GPs retrained
Kyrgyzstan	1996	Primary health-care facilities restructured into family medicine centres
Republic of Moldova	1998–2004	The primary care system functions wholly on a family medicine basis
Russian Federation	1992	Family medicine not the predominant form of primary care practice in any region
Tajikistan	1998	Rural, <i>rayon</i> and city health centres in operation in all regions
Turkmenistan	1995	Unclear
Ukraine	2013	In 2013, 47.5% of the population was served by family physicians, including 38.3% in urban areas and 85.4% in rural areas
Uzbekistan	2001	In rural areas, primary health care is provided in rural physician points, staffed by GPs

In most countries, the most basic facilities and the first point of contact for remote rural areas are *feldsher*-midwife points (FAPs), which are usually staffed by at least a nurse, a midwife and a *feldsher* (physician's assistant) who, unlike a nurse, is able to prescribe medication for certain conditions, especially when there is no doctor available. The activities of FAPs are usually supervised by a physician working in the nearest physician-staffed facility (Ibrahimov et al., 2010). Across the former Soviet republics that have retained them, *feldshers* often also carry out home visits. The Republic of Moldova is one of the countries where FAPs no longer exist. The lowest level of primary health care there is the health office, staffed by a nurse trained in family medicine and serving a population of up to 900 people. Similarly, in Tajikistan health houses now serve as the first point of contact in rural areas, covering areas with a catchment population of up to 1500 people, while in Uzbekistan rural physician points serve the same function.

Solo practices have been introduced as part of the move towards family medicine and are a more common model of care in Armenia, Georgia, Kyrgyzstan and

the Republic of Moldova, although in all countries except the Republic of Moldova old and new models coexist side by side. In Georgia, for example, old primary care centres offer consultations, home visits, some essential medicines, rapid laboratory tests and referral to contracted specialists, while new health centres, funded by international donors, employ GPs and offer a broader range of services (Chanturidze et al., 2009). Kyrgyzstan also runs a mixed model, whereby some GPs now operate as individual legal entities (Ibraimova et al., 2011). In the Republic of Moldova solo practices are not common but are sometimes run as subdivisions of family medicine centres and health centres, which have replaced the FAP (in rural areas) and polyclinic model (in urban areas) that is still dominant in many other post-Soviet countries (Turcanu et al., 2012). In the Russian Federation, Belarus and Ukraine solo family medicine practices are found predominantly in rural areas. In Azerbaijan, Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan there are no licensed solo practices offering primary care.

Beyond FAPs or family medicine practices, the next largest facilities serving the rural population are outpatient departments, for example rural physician clinics or small village hospitals in Azerbaijan, health houses in Tajikistan and primary care centres in Ukraine. They are typically staffed by physicians – often a combination of primary care internists (*terapevty*), paediatricians, nurses and midwives. In some cases these facilities are staffed by other specialists, such as surgeons, dentists (Katsaga et al., 2012) or gynaecologists and obstetricians (Popovich et al., 2011). Occasionally, the *terapevty* may have been replaced by retrained GPs (Popovich et al., 2011). Small village hospitals, for example in Azerbaijan and Turkmenistan, are similarly staffed but also provide a few inpatient beds (Mamedkuliev, Shevkun & Hajioff, 2000; Ibrahimov et al., 2010). As part of the push for the family medicine model, family group practices have been introduced in Armenia and Kyrgyzstan and piloted in Ukraine and Azerbaijan. However, the distinction between these and other rural outpatient facilities is often not clear. Group practices in Kyrgyzstan, for example, were created on the basis of the Soviet-era FAPs, rural doctor ambulatories, polyclinics and rural district hospitals, and are today staffed by a similar mix of health workers as other outpatient centres, that is at least one physician, in addition to nurses and midwives. These group practices were established as separate business affiliates under a legal entity called family medicine centre (Langenbrunner, Cashin & O'Dougherty, 2009) and serve groups of villages with a population of 2000 people or more. In Ukraine in 2013, family doctors served between 900 and 2600 people in rural areas and between 800 and 2300 in urban areas (Ministry of Health, 2014).

For conditions that cannot be treated by providers of primary health care in rural areas, patients travel to polyclinics, which are usually located in larger towns or cities. Polyclinics serve as the first point of access for the urban population. Whilst many have been refurbished or renovated, their underlying operating principles have remained largely unchanged since Soviet times. Polyclinics are large organizations, in which primary care physicians work jointly with a range of narrow specialists representing approximately 10–20 specialties, supported by diagnostic and laboratory services. In most cases, patients are first seen by a primary care internist (*terapevt*) and then referred on to a specialist within the same polyclinic. Patients living in the polyclinic's catchment area are assigned to a *terapevt*, who serves approximately 1800–2000 patients (Ibrahimov et al., 2010). In four countries the polyclinic system has seen substantial changes: it has been gradually replaced by polyclinic–ambulatory unions or hospital–polyclinic unions in Georgia, by family medicine centres in Kyrgyzstan (Ibraimova et al., 2011) and Ukraine, and by family health centres in the Republic of Moldova (Turcanu et al., 2012). In Azerbaijan, Belarus, Kazakhstan and the Russian Federation some urban polyclinics are still separated into care provision for women or children, as during the Soviet period. Elsewhere these services have been merged under one roof. The Republic of Moldova is the only country in which the whole system of primary care providers has been completely transformed in both rural and urban areas, with health points in small communities, family doctor's offices, health centres and family medicine centres replacing the old infrastructure of FAPs, outpatient clinics and polyclinics.

Provision of services

FAPs often have only rudimentary equipment and provide first aid, antenatal and postnatal care, basic disease prevention activities, such as immunization and health education, and simple medical procedures, such as injections and wound dressing (Ibrahimov et al., 2010; Ibraimova et al., 2011; Popovich et al., 2011). In Belarus FAPs are also part of the state-owned pharmacy network at district level and are thus able to dispense medical supplies to the community (Richardson et al., 2008). Physicians working in rural clinics offer primary care services for most common conditions, as well as antenatal and postnatal care. Village hospitals also provide obstetric care and some laboratory services, although many of those have been closed down or converted to outpatient clinics.

Rural facilities tend to lack staff and be chronically under-funded. In response, the system of *raspredelenie* has been reintroduced in Belarus in 2008 (Richardson,

2013) and in Kyrgyzstan, creating problems of continuity, when young doctors leave as soon as they are able to do so, and reinforcing the impression that primary care does not offer high quality services. This system of allocating physicians to rural areas has been abolished in all other countries, but many have introduced incentives such as bonus payments to attract and retain health workers to rural areas (see Chapter 5).

Urban polyclinics usually provide access to a number of specialties, typically cardiology, rheumatology, oncology, ophthalmology, otolaryngology and obstetrics/gynaecology, as well as a full range of diagnostic and laboratory services (Ibrahimov et al., 2010; Popovich et al., 2011).

Primary care staff have always been involved in disease prevention and health promotion activities, such as immunization, screening for sexually transmitted diseases and monitoring of schoolchildren (see Chapter 6). However, in a few countries, such as Kazakhstan, family doctors are now more involved in public health activities (Boerma et al., 2011). Since the introduction of the family medicine model, FAP staff in Kyrgyzstan have been assigned a much larger remit for health promotion activities, involving the local community and NGOs (Ibraimova et al., 2011). In Belarus, too, the workload of primary care physicians has expanded significantly over the last few years, as they coordinate annual routine check-ups for the whole adult population, with a special emphasis on those of working age (Rusovich & Richardson, 2009). At the primary care level in all twelve countries there are large gaps in the risk factor management for non-communicable diseases. This includes general medical advice on issues related to alcohol, diet, tobacco and exercise (Smith & Nguyen, 2013).

Choice in primary care

An ideological rejection of the past led politicians to promote choice as a value in its own right following the collapse of the Soviet Union. As of 2014, all post-Soviet states have formally introduced a right to choose primary care physicians, and some had also introduced choice of specialists (Table 7.2).

Changes have also taken place in the registration of patients, which is no longer universal in all post-Soviet countries. In those countries that still have a system of registration with primary care physicians, most are covered by *terapevty* rather than GPs.

In the field, however, policy and practice rarely fully coincide. Patients are still often assigned to ambulatory care facilities in their area of residence and therefore have very little choice. Although the introduction of a right to choose has been one of the cornerstones of primary care reform in all post-Soviet

Table 7.2 *Choice of primary care physicians and specialists*

	Choice of a primary care physicians	Choice of specialists
Armenia	Yes, but rarely utilized	No, but self-referral common
Azerbaijan	Yes, but rarely utilized	No, but self-referral common
Belarus	Yes, but rarely utilized	Financially discouraged
Georgia	Yes, but rarely utilized	Yes
Kazakhstan	Yes	Partially implemented
Kyrgyzstan	Yes	Yes
Republic of Moldova	Yes	Financially discouraged
Russian Federation	Yes, but rarely utilized	No, but self-referral common
Tajikistan	Yes, but rarely utilized in rural areas	Yes, but rarely utilized in rural areas
Turkmenistan	Yes	No
Ukraine	Yes	Yes
Uzbekistan	Yes	Yes

countries, this is only meaningful if there is excess capacity, which is not the case in many places. Especially in rural areas choice is constrained by the sheer lack of providers, while in urban areas patients have been slow to exercise their right of choice, in part because little information is available on which to base such choices. As a result, the formal right of choice has not made a substantive impact on primary care.

Gatekeeping and referral

During the later years of the Soviet Union, patients were registered with the *terapevty* in whose catchment area they lived but they could also queue to make an appointment with a specialist at the polyclinic without referral (Moore & Busing, 1992). In their primary health care reforms, most post-Soviet countries have formally acknowledged the importance of primary care as a gatekeeper for higher levels of care. Yet, the implementation of gatekeeping has been held back by a shortage of general physicians, a lack of incentives to seek or provide services within primary care and the Semashko-era habit of patients bypassing primary care altogether. Often, patients do not trust the expertise of generalists (Richardson et al., 2008) or resist their choice being restricted (Rusovich & Richardson, 2009). Nowadays it is only in rural areas that patients habitually first address primary care, mainly due to geographical proximity rather than post-Semashko gatekeeping policies.

In four countries (Kazakhstan, the Russian Federation, Tajikistan and Uzbekistan), gatekeeping has not been formalized within health policy (Table 7.3). Although the system of gatekeeping is not legally binding in the Russian

Federation, the majority of patients in rural and urban areas first seek care from the GPs or internist with whom they are registered because, for historical reasons, they often assume referrals to be necessary (Popovich et al., 2011). In Kazakhstan, too, although no gatekeeping policy has been formally introduced, patients generally visit first their GP (89%) or *terapevt* (77%) with new health problems, before they seek specialist care (Boerma et al., 2011). In Ukraine, gatekeeping has been introduced in the country's pilot regions, with certain exemptions, such as paediatric, obstetric or dental care.

Table 7.3 *Gatekeeping and referral functions of primary care*

	GPs with gatekeeping function	Referral to access secondary care
Armenia	Theoretically; not functional	Theoretically; not functional
Azerbaijan	Functional in rural areas	No
Belarus	Functional in rural areas	No
Georgia	Theoretically; not functional	Self-referral often costs patients less than OOP payment for primary care
Kazakhstan	No	Yes
Kyrgyzstan	Yes	Yes
Republic of Moldova	Yes	Financially encouraged, and functional
The Russian Federation	No requirement, but common	No requirement, but still common
Tajikistan	Yes (in pilot regions)	Yes (in pilot regions)
Turkmenistan	Yes	Yes
Ukraine	Yes (in pilot regions)	Yes (in pilot regions)
Uzbekistan	No	No

Yet, as in the Soviet period, patients often prefer to consult a specialist directly without referral from their primary care physician, even if this involves formal or informal payments. This practice has been reported in several countries that have formally introduced gatekeeping, namely Armenia (Richardson, 2013), Azerbaijan (Ibrahimov et al., 2010), Georgia (Chanturidze et al., 2009) and Turkmenistan (Rechel, Sikorskaya & McKee, 2009). Self-referral has seriously weakened the gatekeeping function of primary care, leading to significant overuse of specialist and inpatient care. Self-referrals have been reported even in Kyrgyzstan (Ibraimova et al., 2011) and the Republic of Moldova, although both have been regarded as models for the transition to a family medicine based system (World Bank, 2005b; Boerma et al., 2012). In the Republic of Moldova, for example, patients can self-refer for specific diseases or if they take on the full financial burden of specialist care (Turcanu et al., 2012).

Vertical coordination and integration between primary and higher levels of care are highly problematic in post-Soviet countries. Patient records and discharge

summaries are often not shared between health-care providers and follow-up of patients treated in secondary or tertiary care is often provided at the discretion of these institutions. Primary care physicians are rarely obliged to follow up patients receiving care elsewhere in the system.

The need for a referral to access secondary care is an official requirement – but not necessarily practised – in Kazakhstan, Kyrgyzstan and Turkmenistan, as well as in pilot regions in Tajikistan.

In contrast, the use of referral mechanisms is financially incentivized in Georgia and the Republic of Moldova, where insured patients are covered for secondary and tertiary care when referred by a primary care physician but have to bear the full costs of care if they self-refer. In Armenia, Azerbaijan and Georgia health care is mainly funded OOP so patients have few incentives to pay twice (first a primary care doctor to obtain a referral, as well as a specialist; see Chapter 4).

Patients also perceive the quality of primary care to be low (Chanturidze et al., 2009). Indeed, the main source of resistance to the gatekeeping and referral system that form the backbone of the family medicine model has come from patients themselves. While the lack of trust in generalist physicians is particularly well documented in Belarus (Richardson et al., 2008; WHO Regional Office for Europe, 2008), across all former Soviet countries the persistence of self-referrals to specialists and secondary care is testimony to the low prestige of general practitioners or primary care internists (Rechel et al., 2013) and the fact that patients are not prepared to relinquish the right to seek care from whomever they deem most appropriate. Another source of resistance are specialist physicians, such as paediatricians and gynaecologists, who have been opposed to gatekeeping and referral reforms because they fear a decline in the importance of their profession and also because they are concerned that patients will not receive care of high enough quality from generalists (Holm-Hansen, 2009). With the exception of the Republic of Moldova and Kyrgyzstan, gatekeeping and referral reforms have only been fully implemented in rural areas, such as in Azerbaijan and Belarus (Richardson et al., 2008; Ibrahimov et al., 2010), where merely by dint of geographical proximity patients first seek care from primary care facilities.

Legal status and payment of primary care providers

In contrast to most of Eastern Europe, primary care in the former Soviet Union is mainly still provided in public practices and most primary care providers are salaried. Georgia is exceptional in providing private outpatient care (Smith & Nguyen, 2013). In Azerbaijan, Belarus, Tajikistan, Turkmenistan and Uzbekistan primary care workers are employed by the state, which sets salary

scales and makes all budgetary decisions. This has remained largely unchanged since the Soviet period (Rechel et al., 2013). In Armenia, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova and the Russian Federation primary care providers have been moved from the integrated model (in which health workers are salaried state employees) to the contracting model. Purchasers, such as mandatory health insurance funds (Kyrgyzstan, the Republic of Moldova and the Russian Federation) or state health care agencies (Armenia, Georgia and Kazakhstan) pay providers according to predetermined payment mechanisms, such as capitation or fee-for-service (see Chapter 4 and Table 7.4). However, private OOP payments (both formal and informal) also play a substantial role in many countries of the region, so neither the integrated or the contracting model really capture the full picture of how health services are purchased (see Chapter 4).

Health facilities have gained increasing autonomy in those countries that have moved towards the contracting model, where they are independent budget holders, as in Georgia (Chanturidze et al., 2009), or state economic enterprises, as in Kazakhstan (Katsaga et al., 2012) and Ukraine, which has made primary care facilities legally autonomous. Often, this has changed the employment structure of health workers. While in the Republic of Moldova the district and municipal administrations employ health workers, in Armenia, primary care physicians are employees of state-owned joint stock companies (Hakobyan et al., 2006).

The split between purchaser and provider in these countries (Armenia, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation and, partly, Ukraine) was intended, among many other aims, to create incentives for health professionals to provide better quality care and to retain patients at the primary care level unless otherwise clinically indicated. Yet, as discussed above, patients who self-refer and bear the cost of specialist treatment illustrate that financing and legal reforms alone have not been sufficient to change the health-seeking behaviours of patients.

Access to primary care

The post-Soviet countries inherited an extensive network of health facilities from the Semashko system, including FAPs in rural areas (see Chapter 5). This brought health care, in line with the aspiration formulated at the Alma Ata conference, close to where people lived and worked. Today, geographical access to primary care varies considerably across the region with particular problems in rural areas. In most countries, geographical access in urban areas has generally not been as problematic, as polyclinics have on the whole not been closed down

Table 7.4 *Legal status and payment mechanisms for primary care providers*

Legal status and payment mechanisms	
Armenia	Contracting model: state-owned joint-stock companies; primary care providers are paid on a capitation basis through the State Health Agency; ambulatory specialists are mostly paid on a fee-for-service basis by patients and households; services in the basic benefit package are covered by a global budget; polyclinics are freed from administrative supervision by hospitals, although not in Yerevan where hospitals and polyclinics were merged into medicine centres.
Azerbaijan	Integrated model: primary health-care providers are directly owned by the third-party payer, i.e. the local administration or village councils for FAPs, that is also the employer of health workers. Payment takes place on the basis of past expenditure ('historical incrementalism') and line item budgeting.
Belarus	Integrated model: all primary care facilities are state-owned. Different levels of government are responsible for financing health services at their level of administration. Financing is capitation based.
Georgia	Contracting model: all primary care facilities are autonomous. Health workers are employed by the health facilities where they work. Payment mechanisms for state health programmes differ according to the nature of services. Rural primary care providers are individual budget holders, directly contracted by the Health and Social Programmes Agency.
Kazakhstan	Contracting model: state health-care providers are now state economical enterprises. The <i>oblast</i> health authorities pay primary care providers on a capitation basis. Outpatient consultations and diagnostic services are paid on a fee-for-service basis.
Kyrgyzstan	Contracting model: most primary care facilities are state-owned. The Mandatory Health Insurance Fund acts as the single payer in the state-run health system. Health-care providers enter into contracts with this fund. Payment for primary care providers is based on capitation.
Republic of Moldova	Contracting model: the National Health Insurance Company is the single purchaser of medical services in the mandatory health insurance system, from both public and private providers. In 1991, the ownership of primary care and inpatient facilities at district and municipal levels was transferred to the local authorities at those levels. Primary care is mainly paid for on a capitation basis.
Russian Federation	Contracting model: most primary care facilities are state-owned. Mandatory health insurance funds at federal and territorial levels engage in selective contracting with providers, based on a variety of allocation mechanisms. All public sector health personnel work on a salaried basis.
Tajikistan	Integrated model: almost all health workers are state employees, including retrained family doctors and nurses set up as family teams. The government remains the principal provider of health services, although private OOP payments are the main source of health expenditure.
Turkmenistan	Integrated model: most primary care facilities are state-owned. Health workers, who are salaried government employees are paid by line-item budgeting.
Ukraine	Integrated model: most primary care facilities are state-owned. Staff are paid according to a government-fixed salary scale, although in pilot regions this has been changed to a contract model with allowances for the amount and quality of work.
Uzbekistan	Integrated model: most health facilities are government-owned and all health personnel in the public sector are government employees. Health-care providers in the public sector are paid by a mixture of budget-line financing and capitation.

– often despite severe overcapacity in urban areas. As in Soviet times, some population groups (such as employees of certain government ministries) are still granted access to parallel health systems, although these are slowly being wound down in most countries.

In some countries the general population has retained good geographical access to primary care in both urban and rural areas because health facilities are evenly distributed, facilitated by rigorous targets for geographical coverage. This is the case, for instance, in Belarus, the Republic of Moldova, Tajikistan and Ukraine. Other countries have moved away from the broad geographical coverage achieved in the Semashko era and now struggle to provide for the rural population although this is also in large parts due to the challenging geography of some countries (including deserts and mountainous terrains) and the failure to attract health workers to rural areas. In Georgia, the primary care network has functionally disintegrated following heavy budget cuts and decentralization in the mid-1990s.

In addition to geographical barriers in accessing primary care services in some countries, financial barriers have emerged in the form of both formal and informal OOP payments since the collapse of the Soviet Union (see Chapter 4). Although this is predominantly a challenge for hospital services (see Chapter 8), payments for pharmaceuticals (with outpatient pharmaceuticals usually excluded from basic benefit packages) have become a major obstacle to access in primary health care (Balabanova et al., 2012).

Quality of primary care

A number of challenges have emerged that create difficulties in ensuring the quality of primary care in the post-Soviet countries, including outdated infrastructure and equipment, lack of health workers in rural areas and underdeveloped mechanisms for quality assurance (Rechel et al., 2011). One of the main concerns across the region is the poor management of cardiovascular risk factors in primary care. Surveys have shown that only a very low percentage (less than 10% in many post-Soviet countries) of those with high blood pressure take the necessary medication regularly (Roberts et al., 2012) and treatment rates for those with high levels of cholesterol are even lower (Smith & Nguyen, 2013).

A legacy of the late Soviet period, which emphasized inpatient care and technological solutions, is that primary care facilities were relatively neglected. Only since the end of the Soviet Union have efforts been made to improve primary care and refurbish the physical premises in which it is provided. Despite major progress in many countries, there is still some way to go and there

continue to be major gaps between urban and rural areas. A possible exception is Belarus, following the Ministry of Health's large investments in rural health care. In Ukraine in 2013, 29% of primary care clinics in rural areas and 50% in urban areas were found to be in need of major repairs (Ministry of Health, 2014). In Azerbaijan, many urban polyclinics have been rehabilitated or newly built, while rural facilities have been neglected and their infrastructure is lagging behind; one study found that only 8% of all primary care facilities in rural areas had a piped water supply and almost no facility had a mains sewerage system (Ibrahimov et al., 2010). In Georgia, too, facilities in rural areas have been shown to lack modern equipment (Chanturidze et al., 2009). In Kazakhstan, in 2009, only 35% of rural medical posts complied with national standards for equipment and supplies in primary care (Katsaga et al., 2012). In 2000, many rural primary care facilities in Turkmenistan did not have running water, toilets or fire exits (Mamedkuliev, Shevkun & Hajioff, 2000). In some countries, such as Armenia, Georgia and the Republic of Moldova, donor agencies such as USAID and the World Bank have provided financial assistance to rehabilitate or build facilities, which has significantly improved the situation, especially in Armenia (Richardson, 2013; Chanturidze et al., 2009).

Outdated equipment and a poor supply of pharmaceuticals are additional challenges. In Kazakhstan, until recently, some rural facilities were not supplied with pharmaceuticals (Katsaga et al., 2012). In Armenia, Georgia and Tajikistan facilities lacked more than two-thirds of basic laboratory services and essential equipment for the management of common noncommunicable diseases (Smith & Nguyen, 2013).

One of the biggest problems in some countries is the inappropriate staffing of primary care facilities in rural areas. There is a severe shortage of physicians, mainly due to the challenges of rural life but also because of a lack of opportunities for professional development (Ibrahimov et al., 2010). In Kyrgyzstan and Tajikistan these challenges are exacerbated by large-scale outmigration of health workers leading to critical brain drain.

There are fewer accountability mechanisms in primary care of the former Soviet Union than in Eastern Europe (Smith & Nguyen, 2013). In the former Soviet countries, only very few national policies have sought, explicitly, to improve the quality of primary care. In Azerbaijan only polyclinics and primary care facilities in Baku and other major cities have seen rehabilitation and re-equipment (Ibrahimov et al., 2010). Belarus, Kyrgyzstan, the Republic of Moldova, Tajikistan and Ukraine embarked on more systematic attempts at improving primary care facilities but sometimes these were mainly directed at renovating facilities rather than improving clinical practice. In Belarus, the Programme for the Revival and Development of Rural Areas aimed to improve the condition

of ambulatory care, which was much enhanced (Richardson et al., 2008). In Kyrgyzstan a quality assurance programme monitors indicators such as patient satisfaction; the Moldovan government has introduced a validation scheme for primary health services, whereby a share of the cost is only reimbursed if they meet certain predetermined criteria (Turcanu et al., 2012), and similarly in Ukraine an accreditation system has been introduced for all facilities (Lekhan, Rudi & Richardson, 2010), although effective implementation remains a challenge in both countries. In Georgia, health-care standards and quality assessment are absent, and weak regulatory systems make it difficult to measure or ensure quality of care (Chanturidze et al., 2009). However, with a renewed emphasis on regulatory oversight, this may now be changing.

Conclusions

The remaining gaps in access to high quality primary care in many former Soviet countries are in part a reflection of the fact that monetary support for primary care has been lagging behind rhetoric. However, many (particularly in central Asia) are low-income countries and their poor infrastructure is an indication of a general lack of resources and not unique to primary care. That primary care has been constrained by a lack of resources has, however, aggravated the lack of trust that populations are willing to bestow on it, particularly when secondary and tertiary care facilities are in better physical condition, better equipped and better staffed. The rural population suffers disproportionately from this situation and physicians, *feldshers* and nurses often act as de facto generalist staff, even when they are not fully trained to do so. While recognizing the magnitude of reforms in primary health care over the last two decades, on the whole, primary care facilities in the former Soviet countries are not yet in a position to take on the bulk of health services, as would be necessary for the full implementation of the family medicine model.

There are a number of steps that would need to be taken to achieve this goal. In addition to the appropriate allocation of resources for human resources and equipment, as well as investments in the training of staff (see Chapter 5), these will include revised payment allocation mechanisms (see Chapter 4), improved quality of care through the development and implementation of clinical practice guidelines and the enforcement of quality assurance mechanisms (see Chapters 3 and 11), more clearly delineated levels of care, and improved gatekeeping and referral mechanisms.

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Chapter 8

Specialized and inpatient services

Ketevan Glonti

Introduction

Following the dissolution of the Soviet Union, all post-Soviet countries inherited health systems in which hospitals dominated the provision of care. This extensive hospital-based system became increasingly hard to sustain when government revenues collapsed during the crisis that accompanied transition in the 1990s, triggering wide-ranging changes in the organization, service provision, financing and ownership of hospitals. Countries recognized the need to downsize their hospital sectors and strengthen the previously neglected primary health-care system (see Chapter 7). However, reductions in hospital capacity were often only nominal (limited to the renaming of facilities or reducing the number of beds) or affecting only small rural facilities, rather than large well-equipped hospitals in urban areas (Kulzhanov & Healy, 1999). Most hospitals remained in state ownership, with the exception of Georgia where the majority of health facilities were privatized (Chanturidze et al., 2009). Despite overprovision of hospital services in many countries of the region, the quality of services remains a challenge and geographical and financial access is a problem for some groups of the population. This chapter provides an overview of the current state of specialized and inpatient care in the former Soviet countries, comparing infrastructure, organization and provision of services.

Historical background

The Soviet government had placed a heavy emphasis on quantitative targets based on inputs, leading to the building of more hospitals and the training of more medical personnel. Hospital budgets were mostly determined by

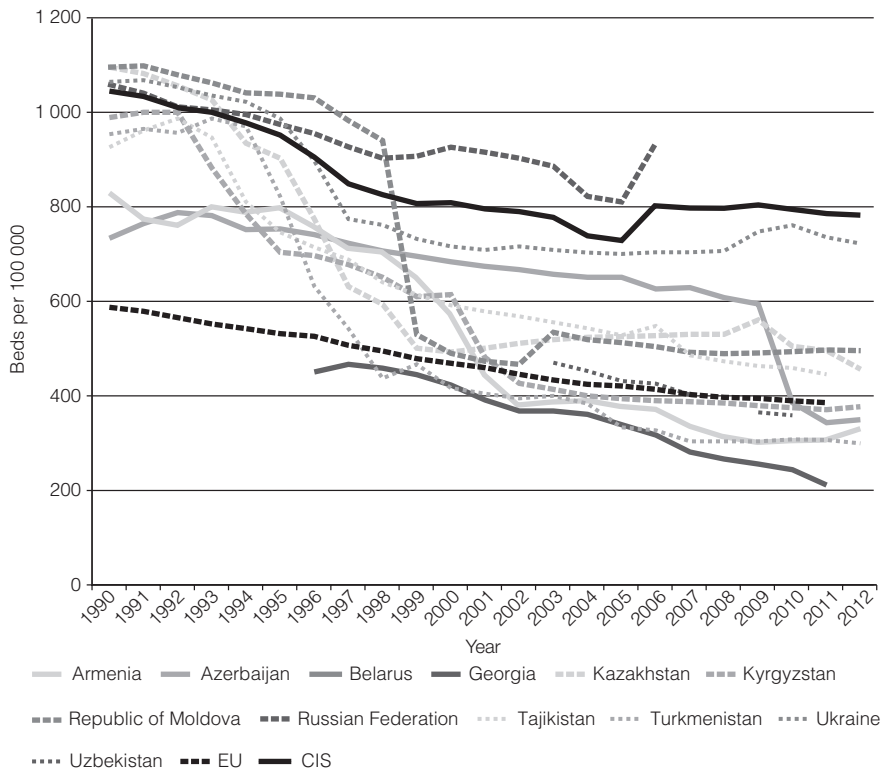
the existing bed capacity and staff levels, creating incentives to maintain or increase both. Most health resources, accounting for about 60–75% of total health expenditure, were designated for inpatient services. In the long run, this resulted in the Soviet Union having one of the highest number of physicians and hospital beds per unit of population (Rowland & Telyukov, 1991; Barr & Field, 1996; Ho & Ali-Zade, 2001; Danishevski, 2008). At the same time, the health system was chronically underfunded, resulting in extremely low salaries for health workers and a general lack of medication (Rowland & Telyukov, 1991).

Health services in each country were provided across a number of administrative tiers, from the national to the regional (*oblast*), city and district (*rayon*) levels. These were often funded from separate budgets leading to the duplication of functional responsibilities and overlapping population coverage (Rechel et al., 2012). As well as these administrative divisions, many hospitals were also differentiated by specialty, with an extensive network of narrowly specialized hospitals treating diseases such as TB and sexually transmitted infections. Yet another differentiation among hospitals was by patient occupation or other characteristics. A closed parallel health system for the so-called ‘elites’ existed, in which a small number of hospitals under the responsibility of various ministries and state companies received a disproportionate share of health funding and could offer more modern equipment, better paid staff and, potentially, higher quality of care (Schultz & Rafferty, 1990; Barr & Field, 1996).

During the Soviet period, the provision of emergency care consisted of two elements. Basic emergency care on site or at home was the function of the ambulance system, while more sophisticated emergency care requiring health facilities was provided by almost all hospitals. Ambulance centres were organized throughout the country. Upon receiving a call or after being informed in person (in particular in more rural areas where access to phones was more limited) about a case, an ambulance would be dispatched. Ambulances were generally staffed by a driver and at least one health professional (physician or *feldsher*). Whenever possible, the emergency care needs of the patient were addressed on the spot but if needed, the patient was transported to an inpatient facility for further care. In rural areas, rural hospitals, *rayon* hospitals or central *rayon* hospitals were the primary location for more sophisticated services (Ahmedov et al., 2007).

Infrastructure

Many former Soviet countries reduced their excess hospital capacity in the 1990s but in Kazakhstan, the Republic of Moldova, the Russian Federation, Tajikistan and Ukraine the number of acute care hospital beds per population still exceeds

Fig. 8.1 *Acute care hospital beds per 100 000 population, 1990–2012*

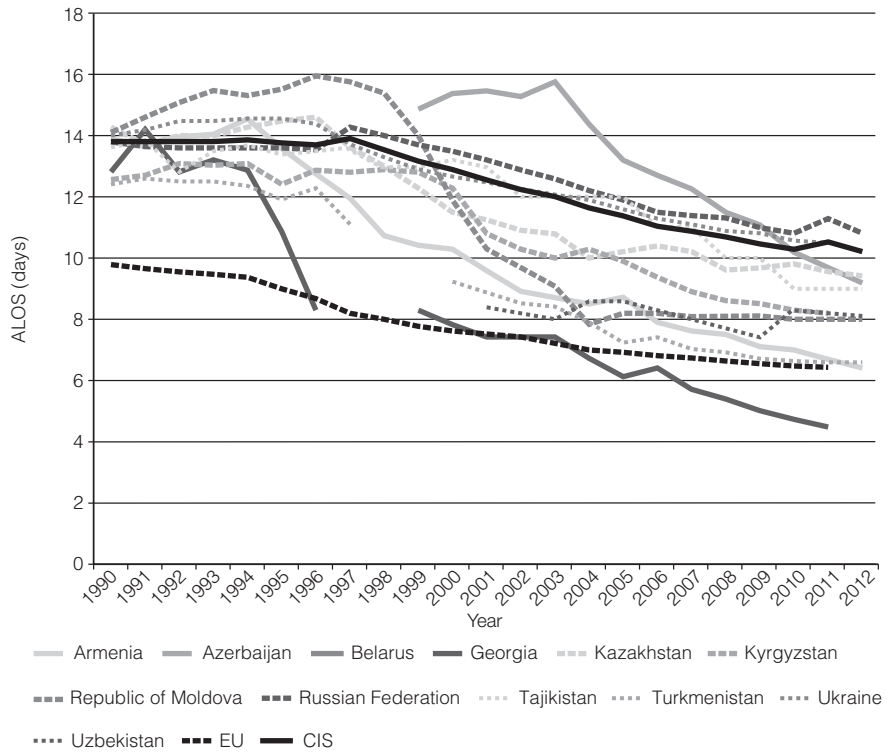
Source: WHO, 2014.

Note: data on Belarus are not available; CIS average reflects the latest available data for the Russian Federation (2005).

levels in the European Union (EU) (Fig. 8.1). In addition, reductions in acute care hospital bed numbers did not necessarily reflect actual needs and were mainly directed at small rural facilities rather than large urban hospitals. In urban areas, the number of hospital beds was often reduced without being accompanied by the downsizing or closure of facilities, whereas specialized hospitals remained largely unaffected by health reforms (Rechel et al., 2013). However, in Armenia, Azerbaijan, Georgia, Kyrgyzstan, Turkmenistan and Uzbekistan the number of acute care hospital beds is now below the EU level.

In parallel with the drop in acute care hospital bed numbers, the average length of stay in acute care hospitals generally decreased. However, this also differs substantially among countries. Patients in Georgia have a substantially lower average length of stay than patients in the EU. This raises the possibility of an artefact in the data, such as the inclusion of a small number of unrepresentative hospitals in the data collection exercise. In the remaining countries patients still tend to stay much longer in acute care hospitals than in the EU (Fig. 8.2), with the longest average length of stay in the Russian Federation. Reasons for this

Fig. 8.2 Average length of stay (ALOS) in hospital (acute care hospitals only), 1990–2012



Source: WHO, 2014.

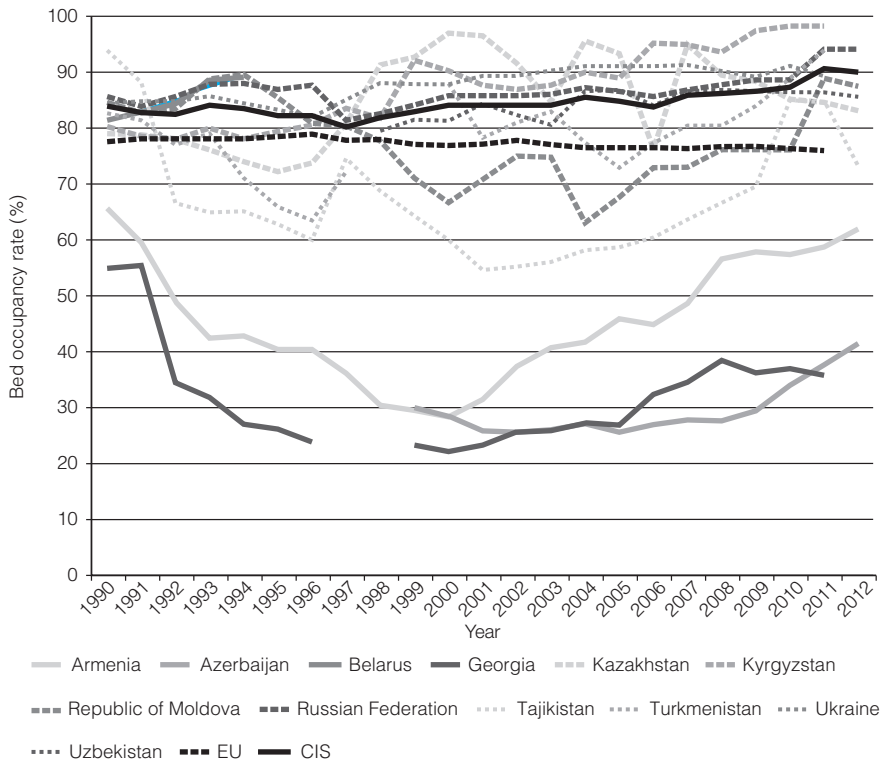
Note: data on Belarus are not available.

might include outdated clinical protocols and financial incentives for hospitals that reward lengthy patient stays.

While decreasing lengths of stay suggest increasing efficiency in the use of hospital resources, bed occupancy rates in several countries are very low (Fig. 8.3), indicating substantial scope for further improvements.

Organization and provision

As mentioned above, during the Soviet period hospitals were vertically organized into tiers, mirroring the public administrative system. At the lowest level were rural or village hospitals, with district (*rayon*) hospitals in larger towns. City hospitals and regional (*oblast*) hospitals comprised the next two levels, while republican (tertiary care) hospitals were at the highest administrative level. Specialist hospitals also operated at district, regional and republican levels. In addition, parallel health systems provided services in their own hospitals (Healy & McKee, 2001). Although some countries have made alterations to this organizational structure, the general setup has remained largely in place,

Fig. 8.3 *Bed occupancy rate (%) (acute care hospitals only), 1990–2012*

Source: WHO, 2014.

Note: data on Belarus are only available up to 1994.

particularly in urban areas. However, some differences exist in the way former Soviet countries have organized their administrative and health systems. The merging of administrative levels, the introduction of intermediate levels and the removal of others have resulted in distinct national systems, making it very difficult to categorize current structures precisely.

For the most part, countries have retained public ownership of secondary and tertiary care facilities. While there are no privately owned hospitals in Belarus diagnostic centres are a significant part of private sector activities in the health system. Other countries, such as Kyrgyzstan, Ukraine, Republic of Moldova and Tajikistan, have only a few private hospitals. However, in contrast, almost all health facilities in Georgia have been privatized. This seems also to be the new direction in Armenia, where health care is being increasingly privatized (Mamedkuliev, Shevkun & Hajioff, 2000; Chanturidze et al., 2009; Khodjamurodov & Rechel, 2010; Lekhan, Rudiy & Richardson, 2010; Ibraimova et al., 2011; Popovich et al., 2011; Turcanu et al., 2012; Kumar, Izenkova & Abikulova, 2013; Richardson, 2013; Richardson et al., 2013).

In some countries, the governance and management of public hospitals have not changed greatly since the Soviet period and are characterized by a strict hierarchical structure. In many countries hospitals are still managed by head physicians, whereas in Belarus and Ukraine – where Soviet structures are still largely in place – individual hospitals have very limited autonomy in managerial and financial decision-making. In most other countries of the region, however, attempts have been undertaken to increase the managerial autonomy of hospitals, for example with a new legal status and allowing the use of extra-budgetary funds.

Rural hospitals

The delivery of inpatient care in rural and urban areas is often structurally different. In general, rural areas have witnessed more substantial changes than urban areas, such as the closure or transformation of rural village hospitals into primary or social care facilities. The scope of care that can be provided by rural hospitals is often limited and tends to overlap with primary or social care. Many are in poor structural condition, lacking basic diagnostic or therapeutic equipment, access to drugs and even utilities such as electricity or running water. In the Republic of Moldova, all small rural hospitals were closed in the late 1990s. In the Russian Federation, any remaining small rural hospitals offer only basic inpatient care. In Kazakhstan and Tajikistan, rural and village hospitals are used for basic emergency and secondary care, maternity and outpatient care. In Kyrgyzstan such hospitals provide outpatient care in addition to general inpatient services. In Ukraine, the number of rural hospitals decreased from 555 to 104 between 2009 and 2013 and only those in isolated areas have remained; they provide outpatient and limited inpatient care, such as for patients with chronic diseases. In Uzbekistan rural hospitals, *rayon* hospitals and central *rayon* hospitals form the first points of contact for patients seeking secondary care; they are however defined as primary care providers (Ahmedov et al., 2007; Ibrahimov et al., 2010; Khodjamurodov & Rechel, 2010; Ibraimova et al., 2011; Popovich et al., 2011; Katsaga et al., 2012).

Rayon hospitals

The next level of hospital services in rural areas is comprised of district (*rayon*) hospitals. Central district hospitals are located at the administrative centre of the respective district. In Azerbaijan these are multi-profile inpatient facilities providing a broad range of secondary care services, including emergency, general surgical, obstetric, gynaecological and paediatric care. Some central district hospitals may have an affiliated outpatient department that provides primary and specialist outpatient care, while others provide stand-alone inpatient

paediatric and maternity services. District hospitals in Belarus similarly provide general secondary-level services such as general medicine and surgery, obstetrics and a wide range of specialties; however, each district also has an outpatient polyclinic delivering specialized secondary care for patients in the community. In Kazakhstan central *rayon* hospitals are located in the largest town of the *rayon*, with many also having a polyclinic attached that functions as an outpatient department. In Kyrgyzstan former central *rayon* hospitals were reorganized in 2002 into so-called territorial hospitals, resulting in greater health service centralization at *rayon* level. In the Russian Federation and Tajikistan district hospitals serve the population of large rural municipalities, providing inpatient care across basic specialties such as podiatry, surgery, obstetrics and gynaecology; they also have outpatient departments that serve as a polyclinic for the local population. Central district hospitals located at the administrative centre of an area have an identical function (Ibrahimov et al., 2010; Khodjamurodov & Rechel, 2010; Ibraimova et al., 2011; Popovich et al., 2011; Katsaga et al., 2012; Richardson et al., 2013).

City and oblast hospitals

In urban areas, city and *oblast* hospitals provide specialized and inpatient care. In the Russian Federation, for example, urban municipalities have multi-profile city hospitals in addition to hospitals for emergency care and specialized hospitals for infectious diseases. In many countries of the region, most outpatient facilities, specialized clinics and diagnostic centres can be found at this administrative level (Ahmedov et al., 2007; Ibrahimov et al., 2010; Katsaga et al., 2012).

Oblast (or regional) hospitals are usually located in *oblast* capitals and generally provide a wide range of specialized services. In Kyrgyzstan all hospitals at *oblast* level were merged into one organizational unit in 2000, with the aim of reducing costs and improving integration and coordination of care. These *oblast*-merged hospitals provide outpatient, general and specialized hospital care at the *oblast* level, incorporating the services previously provided at specialized clinics and specialized hospitals, such as for TB. Regional hospitals in the Russian Federation tend to be large teaching hospitals, with each region having a hospital for adults (500–1000 beds) and one for children (300–600 beds), with both accepting referrals of complex cases from district hospitals and polyclinics throughout the region. All specialties and subspecialties are represented and care is provided by more highly qualified staff than at district level. In the Russian Federation and Ukraine specialized care at the regional level also includes specialized clinics (*dispanserii*), most of which offer integrated outpatient and inpatient departments, although about one-third have only

outpatient departments. Specialist outpatient services are also provided at the regional level for certain specialties such as psychoneurology, gynaecology, oncology, TB or dermato-venereology. These are distinct from the outpatient clinics offering follow-up after admission that are provided by hospitals. In addition, specialized diagnostic centres at the regional level accept referrals of more complex cases from lower levels of the health system. The catchment areas of *oblast*, city and district hospitals may overlap, as in the case of Tajikistan (which had six *oblast* hospitals as of 2007), resulting in inefficiencies and the duplication of services (Ahmedov et al., 2007; Khodjamurodov & Rechel, 2010; Popovich et al., 2011; Katsaga et al., 2012).

Tertiary care/specialized hospitals

Yet another hospital category offering inpatient facilities for certain conditions is the specialized hospital, located in national capitals or regional centres to provide national coverage. In Azerbaijan, for example, these hospitals are components of vertically integrated national systems led by tertiary-level specialized scientific research institutions and providing maternity, TB, dermato-venereal, psychiatric, oncological and endocrinological care. In the Russian Federation, federal hospitals and federal specialized clinics (*dispanserii*) offer highly sophisticated secondary and tertiary services at large and highly specialized hospitals or clinics. As in Azerbaijan, these are often associated with research institutes in their respective fields. Specialized hospitals also exist in Tajikistan, covering medical fields such as paediatrics, cardiology, TB, psychiatric diseases, neurology, obstetrics and gynaecology, as well as emergency medicine.

As a rule, national (republican) hospitals provide more advanced care and lead teaching and research in their area of specialization. In Belarus, for example, tertiary care is provided in single-specialty hospitals, research institutes and teaching institutes that have their own beds. Tertiary-level services are concentrated in the capital Minsk; however, single-specialty hospitals also exist in regional centres. A similar situation exists in Kyrgyzstan, where tertiary care is provided by health facilities at the national level (including national hospitals, centres and scientific research institutes), most of which are located in the capital Bishkek, but specialized dispensaries and hospitals also exist at the regional level (despite the hospital reforms mentioned above). These facilities are narrowly specialized, equipped with the best facilities and staff, provide both outpatient and inpatient care and act as teaching and research hospitals. In Armenia and Uzbekistan too, tertiary inpatient care is generally provided in specialized hospitals and research institutes at the national level and located in

the respective capitals (Ahmedov et al., 2007; Ibrahimov et al., 2010; Ibraimova et al., 2011; Popovich et al., 2011, Richardson, 2013; Richardson et al., 2013).

Parallel health systems

The parallel health systems during Soviet times were attached to certain ministries and large industrial enterprises (see Chapter 3). Although they catered for a small proportion of the population, a disproportionate share of all health funding was allocated to these facilities (see Chapter 4). There were efforts in many post-Soviet countries to downsize these parallel health systems but they tend to be still in place and are considered to provide higher quality care, which is regarded as a valuable employment benefit by members. While employees of these ministries and state enterprises can also access the general public system, people from outside cannot access the parallel health systems. Their importance in relation to the mainstream health system, the amount of funding they receive and the availability of official information on them vary among countries. For example, in Azerbaijan it was estimated that the parallel health systems served approximately 5% of the population (Holley, Akhundov & Nolte, 2004). Excess capacity in some parallel hospitals there is used for private practice. In Kyrgyzstan in 2008 parallel health services accounted for about 5% of total government health expenditure. In 2012 in Ukraine, for which most data are available, parallel health systems accounted for 8.8% of all hospital beds and 7.5% of total government expenditure on health. Although information on the number of people served by the parallel health systems in Ukraine is unavailable, the National Railway, which possesses the largest parallel network, comprised 96 medical institutions in 2012, including 75 hospitals with 8800 beds and 16 independent clinics. It employed 4700 physicians and 11 000 nurses, providing medical care to 1.3 million people. In contrast, parallel health systems in Georgia, where almost all health facilities have been privatized, accounted for less than 1% of total health expenditure (Chanturidze et al., 2009; Ibrahimov et al., 2010; Lekhan, Rudiy & Richardson, 2010; Ibraimova et al., 2011). In the Republic of Moldova, the Ministry of Internal Affairs, the Ministry of Defence, the Ministry of Transport and Road Infrastructure, the Ministry of Justice (Department of Penitentiary Institutions), the Border Service, the Information and Security Service and the State Chancellery have their own health-care networks, parallel to those under the Ministry of Health. However, expenditure on these parallel structures is not made public, except for those under the State Chancellery (Turcanu et al., 2012).

Emergency care

Emergency care systems in former Soviet countries have diverged since Soviet

times. The ambulance-centred system of emergency care in Belarus, which is seen to be part of primary health care, contrasts with the provision of pre-hospital emergency care through ambulance stations in Azerbaijan and Kazakhstan, which function either as stand-alone facilities or as departments within hospitals (Derlet & Gratchev, 2000). In the latter two countries, when patients call emergency services, the attending physician determines whether the patient can be treated at home or should be taken to a polyclinic or hospital. In Kazakhstan ambulance stations are staffed by physicians, *feldshers* and nurses with specialist back-up, including cardiologists.

As a rule, emergency care systems are established in line with planning parameters for population coverage and travel times. In Azerbaijan, for example, pre-hospital emergency care has to be available within 30 minutes of a call and there should be one ambulance team per 10 000 inhabitants. Similarly, in Ukraine emergency care teams are expected to be on site within 10 minutes in urban areas and within 20 minutes outside major settlements. In the Republic of Moldova, emergency stations, substations and points have a maximum radius of 25 km and current norms envisage the emergency team to arrive in 10 minutes in municipalities, towns and villages where the subdivisions of emergency stations are located and in 15 minutes in other cases.

Although emergency care is generally improving, a number of serious problems still need to be addressed in many countries of the region, including insufficient financing, out-dated equipment and poor integration between primary health care and emergency services. Emergency care services in a number of countries (such as the Russian Federation or Belarus) may also end up performing non-emergency services that do not result in hospital admissions, thus duplicating the responsibilities of outpatient or polyclinic services for providing care at home or transporting patients.

Quality

All countries of the region have embarked on plans to improve the quality of hospital and specialized care but major challenges remain. There is no tradition of evidence-based medical practice and a dearth of legal or administrative mechanisms to support its implementation. In some countries, such as Tajikistan, treatment protocols and guidelines are either missing or generally outdated, resulting in inappropriate hospital admissions and overlong lengths of stay. This points to the common practice of keeping patients in hospitals for the wrong reasons. A systematic observational assessment of hospital care for children carried out in the Russian Federation, the Republic of Moldova and Kazakhstan reported unnecessary and lengthy hospital stays, with most

children receiving excessive and ineffective treatment (Duke et al., 2006). In some countries of the region, patients are up to 10 times more likely to be hospitalized for hypertension than in OECD countries, a condition that is best treated in primary health care (Smith & Nguyen, 2013). Other examples of conditions that are commonly treated in hospitals rather than outpatient facilities include TB and drug addiction (Rechel et al., 2011).

Another common challenge is that most health workers have little or no access to up-to-date international literature or opportunities for continuous medical education such as attending conferences (Vlassov & Danishevskiy, 2008). A survey in 2011 found that only about 30% of hospital doctors in Tajikistan would correctly diagnose a heart attack and only 38% had received any kind of continuing medical education in the preceding 12 months (Smith & Nguyen, 2013).

In addition, many hospitals and other health facilities are poorly equipped, following years of underinvestment. Other issues of concern include the emigration of health workers to other countries, resulting in a 'brain drain' from the poorer countries of the region, particularly Kyrgyzstan and Tajikistan, as well as difficulties in assessing the quality of health services, as the necessary data for standard indicators are not routinely collected and/or made available. As a rule, quality assurance mechanisms are underdeveloped. In a survey conducted in 2011, only an average of 65% of hospitals in Armenia, Georgia, the Russian Federation (Kirov *oblast*) and Tajikistan had a committee to oversee quality of care (Smith & Nguyen, 2013). An even more extreme case is Georgia, which, in contrast to other former Soviet countries, liberalized its minimum standards for health service provision and certification regulations, resulting in significant changes to the licensing of medical facilities and the certification of medical personnel.

There are also problems with the quality of emergency care. Pre-hospital and in-hospital emergency services tend to fall behind internationally accepted standards in terms of the skills of personnel and the available equipment and supplies. Challenges in many countries include a lack of adequate communication technologies, the inappropriate location of ambulance units, outdated technical equipment, a shortage of ambulance vehicles and the resources to maintain them, low salaries and high staff turnover. Emergency posts often have poorly maintained ambulances or insufficient vehicles to cope with the workload. They also experience fuel shortages and a lack of medicines. In an emergency, patients may have to be transported for long distances as not all hospitals provide emergency care, or not at all times, as was noted in Kazakhstan (Katsaga et al., 2012).

Access

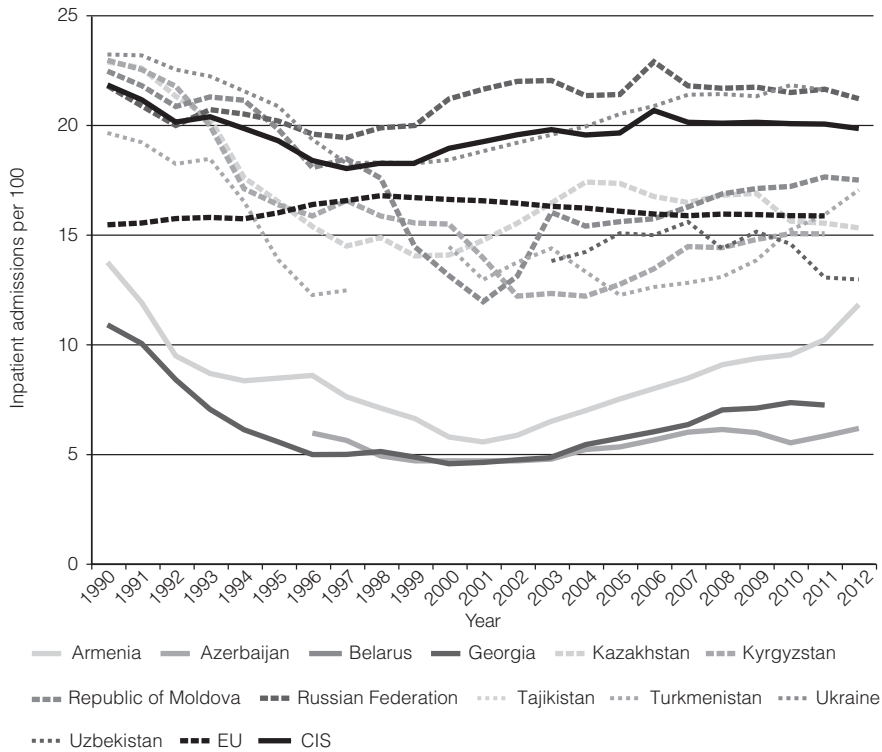
Two main barriers to accessing hospital and specialized services have emerged in the former Soviet countries: geographical and financial. Geographical access is particularly a concern in countries and vast territories with low population densities (Russian Federation and Kazakhstan) or with mountainous terrains (Kyrgyzstan and Tajikistan). Accessibility in rural areas is also of concern in emergency medicine. Rural areas are often disadvantaged in terms of life-saving equipment (including ambulance vehicles) and modern communication technologies.

Financial access has deteriorated as a result of growing OOP payments (both formal and informal) by patients. These payments are more common for inpatient care, where services and pharmaceuticals should generally be provided free-of-charge. Hospitalization has thus become a major – and sometimes ‘catastrophic’ – expenditure for many households, which can lead to impoverishment and greater social inequalities. In some countries, such as Kyrgyzstan and Tajikistan, it is common for patients’ families to take on the nursing responsibilities of bathing and feeding their hospitalized family members. Food and other items such as bed linen are also commonly provided in many countries by patients and their family members (Ensor & Savelyeva, 1998; Falkingham, 2004; Habibov, 2010).

There are wide variations across the region in terms of acute care hospital admissions (Fig. 8.4), with admission rates in 2012 varying from 6 per 100 population in Azerbaijan to 22 in Ukraine (compared to an EU average of 16). While these differences are partly due to different definitions, such as the inclusion or exclusion of day cases and long-term care, the data suggest that in the countries of the south Caucasus access to hospital care is limited (with some notable improvements in Armenia over recent years), while in Ukraine and the Russian Federation there seems to be much more scope for treating patients in primary care or ambulatory settings (see Chapter 11).

Conclusion

This chapter has explored the current state of specialized and inpatient care in the former Soviet countries. Despite various reforms, the Soviet legacy persists in many countries with current disproportionately large infrastructure and outdated organization and provision of services. This entails a waste of resources and perverse sets of incentives for hospitals and health workers. Reductions in hospital capacity have often shied away from politically contested hospital closures in urban areas and have not necessarily reflected the actual needs of

Fig. 8.4 Acute care hospital admissions per 100 population, 1990–2012

Source: WHO, 2014.

the population. The quality of services and their accessibility are other issues of concern that will have to be addressed more comprehensively in future reforms.

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Chapter 9

Pharmaceutical care

Erica Richardson, Nina Sautenkova, Ganna Bolokhovets

Introduction

In the Soviet Union pharmaceutical production was concentrated in the Russian Federation and Ukraine but substantial imports were needed to complement local production. A network of state-owned pharmacies provided a range of outpatient pharmaceuticals with prices fixed at a comparatively low level. Outpatient medicines were available free of charge to vulnerable or high priority groups (such as pregnant women) and were free to all inpatients.

Following the collapse of the Soviet Union, disrupted supply chains initially led to severe shortages of essential medicines. The early 1990s saw the swift liberalization of the pharmaceutical market across the former Soviet Union and this helped to address supply problems but access was now limited by the patient's ability to pay the new market price as opposed to the strictly controlled prices under the previous system. The formal exclusion of outpatient pharmaceuticals from full cover in the Soviet-era benefits package was retained in the post-Soviet period, although with exceptions for some population or patient groups. Not only was this easier politically but public expenditure on health was cut in the face of severe fiscal constraints. The combination of the high prices of pharmaceuticals and the increasing burden of chronic diseases means that access to outpatient pharmaceuticals and the related burden of OOP spending have now become some of the most pressing health policy issues in all former Soviet countries.

This chapter explores key trends and features of pharmaceutical care in the former Soviet countries. It begins by setting out the historical background of pharmaceutical supply and consumption in the Soviet period. This is followed by a discussion of challenges in stepping up domestic pharmaceutical production, which has a major impact on availability and prices. The chapter then considers the regulatory environment, pricing controls and measures

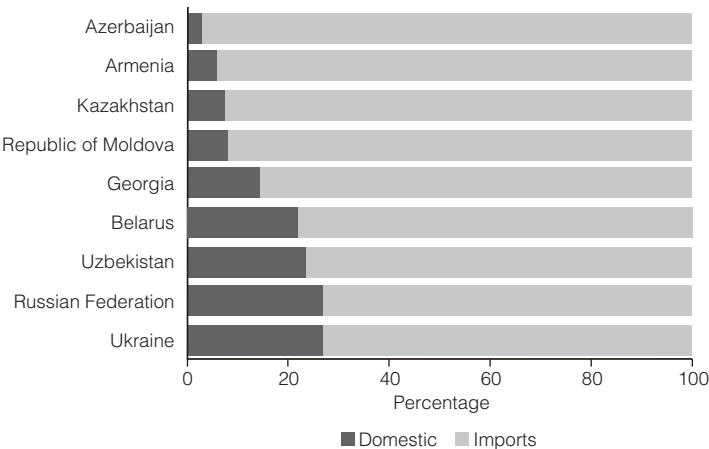
to improve cost-effectiveness that have been adopted. This is followed by a discussion of the population's access to pharmaceuticals in light of diverging benefit packages across the region. A concluding section brings together the key findings of this chapter.

Pharmaceutical production

Pharmaceutical production capacity was not evenly distributed across the territory of the former Soviet Union. Consequently, at independence, Belarus, Kazakhstan and Uzbekistan had some manufacturing capacity but the Russian Federation and Ukraine had a relatively large number of pharmaceutical production facilities, while capacity in most countries of central Asia and the south Caucasus was extremely limited or virtually non-existent. These different starting points in 1991 are still visible two decades later in the variation of locally produced pharmaceuticals as a percentage of total pharmaceutical consumption by value (Fig. 9.1).

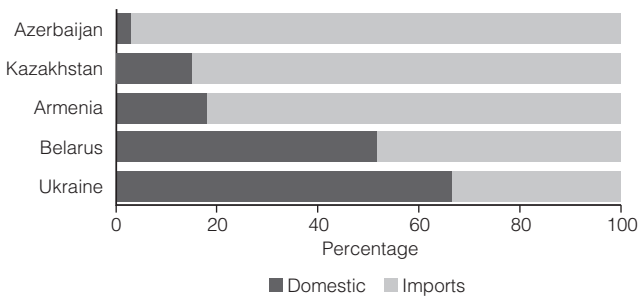
However, although domestic proportion is low in value, it is high in volume (Fig. 9.2). This is because local production capacity is overwhelmingly geared towards the production of low-cost generics. In order to overcome full reliance on imported pharmaceuticals, the development of domestic production capacity is high on the policy agenda in most former Soviet countries. The aim is to develop domestic production capacity for low-cost generics in order to improve financial security. However, the drive to boost domestic manufacturers

Fig. 9.1 *Proportion of total pharmaceutical consumption from imports and domestic producers by value, 2011*



Source: Pharmexpert, 2013.
Note: no data available for Kyrgyzstan, Tajikistan and Turkmenistan.

Fig. 9.2 *Proportion of total pharmaceutical consumption from imports and domestic producers by volume, 2011*



Source: Pharmexpert, 2013.

Note: no data available for Georgia, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Tajikistan, Turkmenistan and Uzbekistan.

of pharmaceuticals has also been part of a wider economic strategy to diversify the economy and support high-tech, knowledge-based industries. Policies supporting domestic production have had notable success in increasing the share of domestically produced pharmaceuticals in Armenia, Georgia, Kyrgyzstan and Uzbekistan, although it should be borne in mind that these countries were coming from a very low starting point.

Across the region, pharmaceutical manufacturing, distribution and retail are now almost universally run for profit by private enterprises, although, for political and strategic reasons, the state retains a controlling stake in pharmaceutical manufacturers and wholesalers in Belarus. In Georgia, wholesalers have developed de facto monopolies on the import of brand-name medicines by acting as exclusive agents and this is one reason why pharmaceutical prices in this country are among the highest in the region (Transparency International Georgia, 2012). However, local production relies on imported materials; in the Soviet Union active substances were mostly manufactured in the Russian Federation but since independence this production has ceased.

After the shortages experienced in the late Soviet era and in the early years following independence, the privatization of pharmacies in the first half of the 1990s resulted in a rapid expansion of the retail sector. The distribution of pharmacies is now mostly determined by market forces and there tends to be overprovision in urban areas and underprovision in rural areas, where many pharmacies have closed. Only in Azerbaijan, Belarus and Turkmenistan are there still a significant number of pharmacies owned by the state or local government. In Ukraine in 2012, 17% of pharmacies were still owned by the government. Geographical access to pharmaceuticals in rural areas remains

a serious policy concern across the region and several countries have sought to address these imbalances. In the Republic of Moldova since 2011 new dispensing pharmacies must be at least 500 m away from existing ones, in order to 'space out' providers. In other countries, both public and private pharmacies have been opened on the sites of rural primary care providers. While this improves access to pharmaceuticals for rural populations, there can also be considerable conflict of interest in cases where prescribing doctors also own the only local pharmacy that can dispense the drugs. Few countries have sought to limit such conflicts of interest. Across the region the licensing requirements for pharmacies vary greatly but where there is still a significant number of publicly owned pharmacies these often have much weaker regulatory requirements than are required for privately owned pharmacies.

Regulation of pharmaceuticals

The swift privatization of pharmaceutical providers in the first half of the 1990s was often accompanied by a marked liberalization of the whole pharmaceutical market. However, the health ministries of the newly independent states were often ill-equipped to deal with the regulation of pharmaceutical import and production. There is no single institutional pattern of how the regulation of pharmaceuticals is organized. Most drug agencies in the region are semi-autonomous and most are self-financing, although in Belarus, Georgia, the Russian Federation, Tajikistan and Ukraine the agencies receive co-financing from the government. In Belarus, Kyrgyzstan, Tajikistan and Uzbekistan, the same bodies have retained responsibility for regulating the quality of imported and locally produced pharmaceuticals, as well as for the licensing of pharmaceuticals, pharmaceutical manufacturers and pharmaceutical suppliers. In Azerbaijan and the Republic of Moldova, medicines are regulated by the drugs agency and a separate agency is responsible for licensing (Ibrahimov et al., 2010; Turcanu et al., 2012). In Tajikistan, licensing can only be undertaken by the Ministry of Health.

Fake or poor quality pharmaceutical products are a concern for patients across the region. While there are nominal policies for ensuring the quality of pharmaceuticals, few studies have been undertaken to ascertain the proportion of substandard pharmaceuticals on the market, largely on account of the prohibitive cost of such research. Most quality management systems rely on quality control mechanisms at the expense of quality assurance, which is a less efficient use of limited resources (Bolokhovets et al., 2013). Four laboratories from the former Soviet Union have now, however, been prequalified by WHO and can be used as regional reference laboratories: two in Ukraine, one in

Belarus and one in the Russian Federation. Nevertheless, while the policy focus is often on ensuring the quality of imported pharmaceuticals, there are also major concerns about domestically produced medicines. In the Russian Federation, for example, approximately 12% of all drugs sold were estimated to be counterfeit, and 60% of counterfeit pharmaceuticals seized were found to have been produced domestically (Popovich et al., 2011).

Compliance with good manufacturing practice (GMP) is not currently widespread through the region but achieving GMP compliance for domestic manufacturers is the professed aim of many policies directed at boosting domestic pharmaceutical production. It is hoped that achieving GMP compliance will boost consumer confidence in locally produced pharmaceuticals and enable countries to export to global markets and bring in important revenues. However, in 2011 just 10% of the 1100 production facilities in the Russian Federation were GMP-compliant; although by 1 January 2014 all facilities were supposed to be compliant with GMP standards by law (Pharmexpert, 2013). The Customs Union between the Russian Federation, Belarus and Kazakhstan has also advanced the GMP agenda, as joint drugs registration is an important aspect of the Union and would be greatly facilitated by GMP compliance (Richardson et al., 2013). In Ukraine, which has the largest pharmaceutical production capacity in the former Soviet Union, the biggest manufacturers are GMP-certified and the GMP inspector – the Ukrainian State Administration on Medicinal Products – is the only member of the international Pharmaceutical Inspection Cooperation Scheme from the region (Lekhan, Rudiy & Richardson, 2010).

In theory, there is a strict delineation between those pharmaceuticals that are available over-the-counter and those that are available on prescription only. However, in practice this distinction is only strictly enforced for narcotics, psychotropics and their precursors. The easy availability of first and second-line antibiotics for the treatment of TB, for example, has been identified as a serious obstacle for the control of multiple drug resistance in this disease (Mosneaga et al., 2008). Restricting over-the-counter access to antibiotics and other medicines by enforcing prescription-only rules has been attempted in most countries of the region. In the Republic of Moldova, for example, the provision of first-line drugs against TB was prohibited in 2012. However, in many countries such restrictions have not yet been fully enforced, partly because there is little support among patients and pharmacists. Over-the-counter access (at a price) to almost all pharmaceuticals means that potentially a significant proportion of household budget expenditure is spent on ineffective and possibly dangerous pharmaceuticals. It also greatly limits the scope for influencing prescribing patterns and generic substitution. Furthermore, adequate monitoring of adverse

reactions is severely hampered by the routine purchasing of prescription-only drugs over the counter; this undermines attempts to strengthen mechanisms for pharmacovigilance (drug safety).

Medicines are marketed directly to the general public through all media channels, although there are strict restrictions on the advertising of prescription-only medicines to non-specialist audiences, except in Georgia where pharmaceutical advertising is practically unrestricted (Gotsadze, 2011). Direct marketing to doctors is generally permitted. While this can lead to distorted prescribing practices, it is also an important source of continuing professional development because many physicians would otherwise have no way of updating their knowledge or attending international conferences. Illegal 'kick-back' payments to doctors are not strictly controlled. Research in the Republic of Moldova has shown that this had a negative impact on patients' trust in primary care physicians because patients were well aware of the bonuses doctors received for prescribing certain products (Bivol et al., 2012). In Tajikistan it has been found that payments from pharmaceutical companies are the only 'perk' keeping GPs in the profession (Isupov et al., 2010).

Pricing pharmaceuticals

Due to the high level of OOP spending on medicines, policies to control the prices of pharmaceuticals have been developed in most post-Soviet countries. Direct price controls have been successful in Belarus (Pharmexpert, 2013), although this also reflects the nature of the wider economic system in this country, which facilitates the implementation of such interventions. Legally mandated price controls in the Russian Federation use reference pricing mechanisms to set maximum prices, as well as maximum profit margins for wholesalers and retailers, but only for drugs included in the essential medicines list (EML) (Popovich et al., 2011). Profit controls are in place in the Republic of Moldova, limiting the maximum percentage mark-up on retail and wholesale prices. The Republic of Moldova also has a system of reference pricing in place for all medicines included in the EML (Turcanu et al., 2012). In Ukraine price controls for a restricted list of pharmaceuticals are set at both the national and regional level, and prices between regions can vary by a factor of three (Lekhan, Rudyi & Richardson, 2010). In Georgia, Armenia, Azerbaijan, Kyrgyzstan and Tajikistan there are no price controls, and wholesale and retail mark-ups are as high as can be borne by the market. Prices are closely influenced by exchange rates, demonstrating the region's dependence on pharmaceutical imports (Marquez & Bonch-Osmolovskiy, 2010).

The pharmaceutical sector in all countries of the former Soviet Union is highly profitable and profit margins are generous, even in those countries that have adopted policies to contain prices. As most pharmaceuticals are purchased by patients at OOP cost price, governments do not have the same bargaining power when purchasing medicines that many governments in western Europe have used effectively. Centralized purchasing of pharmaceuticals is no longer universal. In Kyrgyzstan and the Russian Federation, for example, health facilities are themselves responsible for purchasing medicines in line with the EML, although the procurement of vaccines and insulin is tendered and these are purchased centrally through the Ministry of Health (Popovich et al., 2011; Ibraimova et al., 2011). Such fragmentation of purchasing means there is limited room for employing economies of scale, even in the Russian Federation, which is by far the largest market in the region. However, centralized purchasing has also been associated with challenges. In Ukraine, it has been criticized because prices were still high, despite the use of tendering in procurement (Lekhan, Rudyi & Richardson, 2010). Efforts to recentralize the procurement of pharmaceuticals in the Republic of Moldova have been stepped up but a recent study found that, on average, medicines procured by the public sector cost 1.7–2.4 times the international reference price (Sautenkova et al., 2012). Where international agencies are involved in the purchasing of essential medicines, the situation is further complicated. In Tajikistan, a specific body has been set up to coordinate centralized purchasing between the Ministry of Health and international development partners (Khodjamurodov & Rechel, 2010). The fragmentation of the wholesale market similarly contributes to the high prices of pharmaceuticals. Across the region there are a large number of relatively small wholesalers and their continued existence is facilitated by the large mark-ups on pharmaceutical products. This also makes it difficult to regulate the pharmaceutical market and equally does nothing to foster self-regulation.

Measures to improve cost-effectiveness

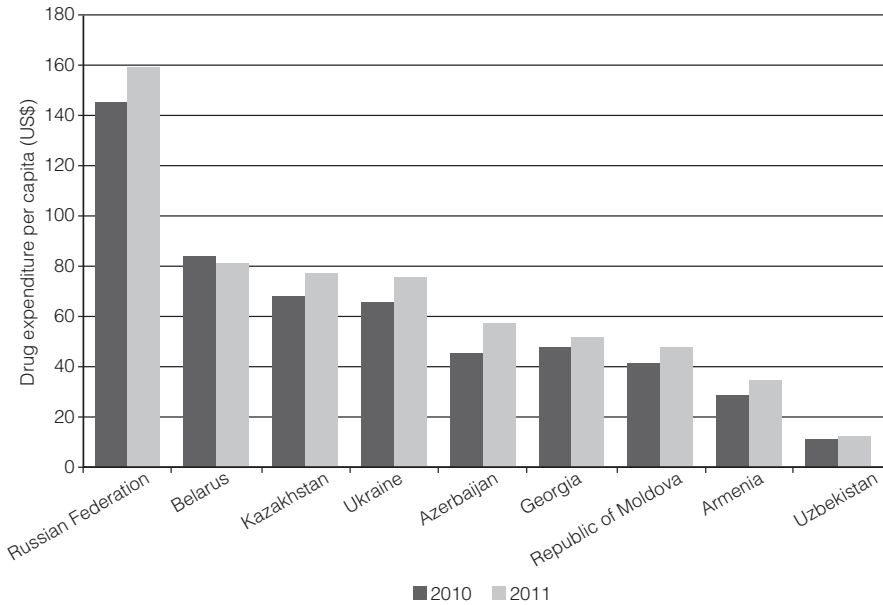
EMLs support and encourage the use of generics. They are in place or under development in all countries of the former Soviet Union and – at least in theory – guide and support the rational use of pharmaceuticals. Alongside clinical efficacy and public health impact, the main consideration when deciding which medicines should be included in the EML is affordability. However, implementation of EMLs varies; selection procedures are not always consistent, evidence-based or transparent. Across the region, not all pharmacies carry the full stock of drugs on the EML and the EML is not always used to inform selection procedures in pharmacies, although a wide range of other ‘off list’ drugs are stocked.

Substitution of brand-name pharmaceuticals with generics continues to be challenging in many countries. Prescribing policies in the Republic of Moldova and Ukraine require doctors to use generic names on prescriptions and in theory a dispensing pharmacist needs to get permission to substitute this with a brand-name product. However, in practice this is decided between the pharmacist and the patient without the doctor's knowledge (Turcanu et al., 2012). In Belarus, generic substitution has been difficult, in part because, during training, doctors often learn the brand names rather than the generic names for drugs and when they start working, automatically prescribe brand names. In Georgia (and elsewhere in the region), pharmacies have incentives to dispense brand-name medicines in preference to generics (even when the prescription uses the generic name) and doctors are similarly incentivized to use brand names when prescribing because they are paid bonuses by pharmaceutical companies based on the medicines they prescribe (Transparency International Georgia, 2012). By contrast, prescribing studies in Kyrgyzstan and Tajikistan show a high level of generic prescription, about 70% in both countries (Abdraimova, Aleshkina & Samiev, 2009).

Across the region, measures to influence the behaviour of those prescribing or dispensing pharmaceuticals do not sufficiently promote the most cost-effective use of pharmaceuticals. There are strong incentives for doctors to over-prescribe and there is a preference among both doctors and pharmacists for newer and more expensive drugs, as these are perceived to be safer and more effective than well-established generics. This belief is often shared by patients. Policies promoting rational drug use have proved challenging to implement and their success is rarely monitored. Obstacles to rational drug use across the region include the frequent use of injections, the prescription of multiple drugs which have the same therapeutic effects, and the irrational use of antibiotics and other drugs.

Pharmaceutical expenditure per capita (for both inpatient and outpatient pharmaceuticals) varies widely across countries, with the lowest levels in 2011 in Uzbekistan and the highest in the Russian Federation (Fig. 9.3). Furthermore, there are also major variations within countries and pharmaceutical consumption in rural areas is much lower than in urban areas. In Belarus, for example, per capita consumption is 10 times higher in urban than in rural areas (Richardson et al., 2013).

Pharmaceuticals also account for a high percentage of total health expenditure in several countries, reaching 44.1% in Georgia in 2010 and 34.6% in the Republic of Moldova in 2011 (WHO, 2014). According to expert estimates, pharmaceutical expenditure in Ukraine in 2012 accounted for 38% of total health expenditure.

Fig. 9.3 Total pharmaceutical expenditure, US\$ per capita, 2010–2011

Source: Pharmexpert, 2013.

Note: no data available on Kyrgyzstan, Tajikistan and Turkmenistan.

Access to pharmaceuticals

Overall, in countries of the former Soviet Union, patients have very little financial protection from the high prices of pharmaceuticals. Benefits packages are limited in all three dimensions of coverage: breadth (who is covered), scope (which benefits are covered) and depth (what proportion of cost is covered). The breadth of coverage tends to be very narrow and only few segments of the population receive government assistance in purchasing prescription pharmaceuticals. The most generous coverage is often afforded to ‘veterans’, followed by population groups such as pensioners, children (of various age groups), pregnant and post-partum women, people registered as having disabilities, the registered unemployed, internally displaced persons (IDPs) and others. However, often not all drugs are available at all times in the pharmacies that are allowed to dispense them under government schemes, in which case even those who are formally eligible for free or subsidized medicines need to purchase them OOP. In Belarus and Turkmenistan, only state-owned pharmacies are able to dispense pharmaceuticals at a discount for eligible patients.

While the range of outpatient pharmaceuticals covered for these population groups is relatively comprehensive, outpatient pharmaceuticals for the treatment of certain conditions are covered for the whole population (see Chapter 4). This usually includes treatment for HIV infection, TB, epilepsy, certain psychiatric

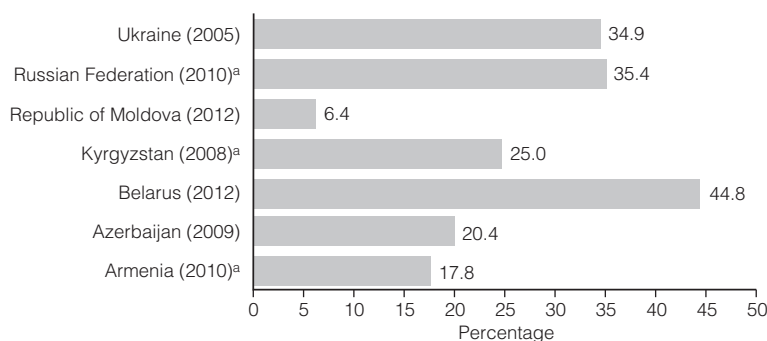
conditions, asthma and diabetes. Particularly rare or expensive conditions may also be included, for example haemophilia and post-transplant care. However, the range of pharmaceuticals that can be reimbursed for specified conditions tends to be limited and, while the treatment for the specific condition may be covered, co-morbidities or complications rarely are.

The depth of coverage under different benefits packages varies among and within countries and by eligibility. For example, in Belarus veterans are covered for 100% of the fixed price, while other categories of patients are expected to co-pay a variable percentage of the fixed price. In Kyrgyzstan and the Republic of Moldova, the benefits package under MHI only covers reimbursement of a limited number of outpatient medicines. Extending coverage to include certain outpatient pharmaceuticals can be a step towards strengthening prescription-based medication sales but can also improve cost-effectiveness through the promotion of generics, although the external reference pricing mechanism does not always ensure the lowest prices are reached (Sautenkova et al., 2012). In Ukraine, for example, a pilot project was set up in 2012, in which patients with hypertension benefited from having their anti-hypertensive medication to a large degree reimbursed. Consequently, the number of consultations and treatment adherence improved dramatically.

However, these reimbursement mechanisms only affect pharmaceuticals purchased with a prescription and often only cheaper generics. If patients perceive brand-name drugs to be of better quality, they have to pay the full price. For population groups and conditions not included in benefits packages, the full costs of outpatient pharmaceuticals have to be paid for OOP and in full by patients and their households. Indeed, the overwhelming majority of outpatient pharmaceuticals are not covered by government-guaranteed benefits packages and the public share of total pharmaceutical expenditure is low across the region (see Fig. 9.4). The inadequacy of benefits packages for pharmaceuticals in all former Soviet countries means that even vulnerable population groups have to pay for their medications OOP most of the time. Pharmaceutical costs dominate OOP payments throughout the region, posing a major threat to financial equity and access (Balabanova et al., 2012). There is evidence that pharmaceutical costs constitute a major barrier to care and that patients forego necessary treatment as a result (Footman et al., 2014). In rural areas, recourse to traditional remedies is also commonplace in some countries, particularly Kyrgyzstan and the Republic of Moldova (Stickley et al., 2013).

When compared with the Soviet era, the availability of pharmaceuticals has improved drastically, particularly in terms of the range of drugs now available on the market. However, this improved availability is largely confined to urban areas and community pharmacies are often better stocked than hospital

Fig. 9.4 *Public pharmaceutical expenditure as % of total pharmaceutical expenditure, latest available year*



Sources: ^aWHO, 2013; WHO, 2014.

Note: no recent data available for Georgia, Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan.

pharmacies. Consequently, there are significant geographical disparities in access to pharmaceuticals, as well as logistical barriers to obtaining medicines that are nominally covered in public benefits packages. Shortages of pharmaceuticals also occur in hospitals, often as a result of underfunding, weak procurement capacity and a lack of transparency in procurement procedures. Inpatients (or their relatives) often need to purchase drugs at full price from private pharmacies to take into hospital, even though officially in all countries of the region inpatient pharmaceuticals are included in benefits packages. Sometimes inpatients also choose to purchase their own pharmaceuticals because they believe them to be of higher quality than those dispensed in hospital. In 2010, it was estimated that, be it by choice or necessity, 80% of inpatients had to pay part of the costs of their medicines in the Russian Federation (Marquez & Bonch-Osmolovskiy, 2010). In 2011, 62.7% of hospital inpatients in the Republic of Moldova reported buying their own medicines because the hospital was incapable of providing all the medicines necessary for treatment (Turcanu et al., 2012). The situation was found to be even worse in Ukraine, where, according to a 2012 household survey, 90.7% of hospitalized patients had to purchase their own medicines (State Statistical Committee, 2013).

Conclusion

This chapter has described major progress in access to medicines in post-Soviet countries and also a number of remaining challenges. Not only are there major geographical imbalances but also financial access is a problem throughout the region, as patients cover a large part of costs themselves.

Furthermore, there continues to be a reliance on brand-name pharmaceuticals. In low-income countries such as Kyrgyzstan and Tajikistan, where generics dominate the market and generic prescribing is heavily promoted, generic prescribing is high; it is also higher in countries in which the state bears more of the cost of paying for pharmaceuticals. Nevertheless, implementing rational prescribing policies in an environment in which most drugs can simply be purchased without a prescription over the counter is another significant challenge. The weak regulation of pharmaceutical marketing also contributes significantly to the irrational use of medicines. Consequently, although rational prescribing policies usually envisage retraining primary care doctors, there is also a need for patient information as well as incentives to reduce self-treatment, which can lead to the harmful overconsumption of pharmaceuticals.

It has also proved difficult to encourage generic substitution in the region, at least in part because patients, pharmacists and doctors perceive brand-name pharmaceuticals to be of better quality. While this is by no means unique to the region, weak regulation of the pharmaceutical sector throughout the former Soviet Union has contributed to this lack of trust in generics and also to the distrust of rational prescribing policies. It will be interesting to see whether the attempts to build national pharmaceutical capacity in line with GMP standards will help in fostering public trust as well as ensuring access to pharmaceuticals by reducing the exposure of pharmaceutical prices to volatile currency markets.

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Chapter 10

Mental health care

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Introduction

There is growing recognition of the mental health burden in Europe, including in the former Soviet countries (see Chapter 2). However, the reform of mental health services has lagged behind reforms in other parts of post-Soviet health systems. Faced with a problematic Soviet legacy of institutionalizing people with mental health problems and learning disabilities, and the misuse of psychiatry for political reasons, the countries of the region have adopted new mental health legislation, set up pilot community mental health centres and developed new curricula for primary care staff. However, far too often these pilot projects still need to be rolled out to the rest of the health system and efforts to introduce mental health services in primary care are also still at an early stage.

This chapter reviews the progress that has been made so far. It starts by giving a brief historical overview of practices in the Soviet period. This is followed by an analysis of post-Soviet developments, including with regard to the organization and provision of mental health care, the human resources available and the adequacy and quality of services.

Historical background

Mental health care during the Soviet period was marked by two main factors: the socialist ideology of the perfect Soviet '*tovarishch*' (comrade) and the oppression of people opposed to the political system. The Soviet ideology promoted an ideal society, in which everybody had to fit in with socialistic standards (Birley, 2002). The Russian Association of Psychiatrists supported the view that mental illness was characteristic of capitalist societies and would eventually disappear under the communist regime (Gordon & Meux, 2000). This approach was in

line with the notorious statement of a Soviet official at the Moscow Olympics in 1986 who claimed that '(t)here are no invalids in the USSR!', illustrating the prevailing philosophy regarding people with disabilities during the Soviet era (Fefelov, 1986; Phillips, 2009, 2011).

People who could not fit in with socialist standards because of their mental health problems were seen as incompletely developed (Gordon & Meux, 2000) and faced stigma and discrimination (US Delegation, 1989; Bonnie, 2002; van Voren, 2010; World Psychiatric Association, 2013). This approach had serious consequences for the life of people with mental health problems, as well as for those with learning disabilities. Most were institutionalized and completely removed from the communities in which they had previously lived. Families were strongly encouraged to forget about their 'faulty' relatives, and abandon them to the institutions.

There were two main types of institutions: Ordinary Psychiatric Hospitals (OPHs) and Special Psychiatric Hospitals (SPHs). The SPHs were maximum-security forensic hospitals (US Delegation, 1989). Their conditions were 'unduly harsh and restrictive', as reported by the first western psychiatrists to enter these hospitals and interview patients and relatives in 1989 (US Delegation, 1989). Patients were treated in an inhumane manner and their basic human rights were violated. The western psychiatrists found a somewhat better situation in the OPHs, which took a more humane approach towards patients and provided some forms of treatment – although usually ineffective or counterproductive.

For those who managed to escape institutionalization, or who were discharged on a temporary basis from psychiatric hospitals, there was no return to normal life and no possibility of reintegration into society. For example, once diagnosed with schizophrenia, a person was automatically excluded from most forms of skilled and professional work. Mental health diagnoses were for life, as Soviet psychiatry did not recognize the concept of recovery. Only a court could remove a mental health diagnosis and this hardly ever happened (Birley, 2002).

The second key factor that marked psychiatry during the Soviet era is the history of abuses against political dissidents. For many years before the end of the cold war there were allegations and, in some cases, clear evidence (Bonnie, 2002) that the Soviet Union did not only maltreat people with mental health problems but also abused psychiatry for political purposes. It has been estimated that one-third of all political prisoners in the Soviet Union were locked up in psychiatric hospitals (van Voren, 2010). People were even arrested for distributing pamphlets or writing articles. During official party festivities, potential problem-makers were imprisoned and released after the festivities were over. Research carried out after 1989 confirmed that some people were

incarcerated in SPHs solely because their political beliefs differed from the dominant communist ideology and they shared these beliefs with others. These people did not have any mental disorders and did not face any official trial. Inside psychiatric hospitals, psychiatrists administered antipsychotic drugs as a punishment for people who expressed anti-communist views.

Reports of systematic abuses of psychiatry for political reasons, dating back to the mid-1950s, were highlighted by Amnesty International in 1975 (Amnesty International, 1975). The accumulating evidence that people were confined in SPHs without medical justification led the World Psychiatric Association to condemn the Soviet Union in 1977. Nevertheless, the number of reports about abuse of psychiatry kept growing. In 1983 the All-Union Society of Neuropathologists and Psychiatrists seceded from the World Psychiatric Association, anticipating their imminent expulsion (Gordon & Meux, 2000).

Questions remain on the scale of involvement of psychiatrists in these abuses and the underlying reasons for it. Gordon and Meux (2000) surmised that the wrongdoings in mental health care in the Soviet era had their origins in a theoretical point of view about what was considered normal, which was later misused for political purposes. This is supported by Bonnie (2002), who noted a crucial difference between wrongdoings due to corruption and those due to cultural factors. In his view, abusive mental health care in the Soviet Union was carried out by psychiatrists who genuinely thought that people opposing the socialist ideals had mental health problems (US Delegation, 1989). There were also psychiatrists who helped the Soviet party and the KGB (*Komitet gosudarstvennoy bezopasnosti* – the Committee for State Security, i.e. the Soviet secret service) on purpose.

Many psychiatrists genuinely believed, or took at face value, the criteria for diagnosis promoted by lead psychiatrists such as Snezhnevsky. This was probably facilitated by the superficial and short training of professionals which led to overdiagnosis of mental illnesses (US Delegation, 1989). There were also psychiatrists who consciously helped the Soviet regime to repress people on political grounds. Some psychiatrists were involved in the repression apparatus voluntarily, while others gave in to coercion (Birley, 2002).

One of the outcomes of these abusive practices was that during the Soviet era significantly more people were diagnosed with schizophrenia than in western countries or other countries outside the Soviet sphere of influence (Birley, 2002). This was mainly due to the high prevalence of so-called ‘sluggish’ schizophrenia, often the preferred diagnosis for political dissidents. According to leading Soviet psychiatrists (such as Snezhnevsky and colleagues), this illness was a mild form of schizophrenia, with symptoms such as ‘reform delusions’,

‘struggle for the truth’, and ‘perseverance’ (Birley, 2002). A dominant role in the repression of political dissidents through psychiatry was played by the Serbski Institute, the forensic hospital closely connected to the KGB. This institute was notorious for its frequent use of the diagnosis of schizophrenia (Birley, 2002).

Post-Soviet mental health policies

With the dissolution of the Soviet Union, many shortcomings of the Soviet mental health system were exposed, and service providers and decision-makers came under international scrutiny. They were under pressure to put a stop to abuses of psychiatry for political purposes and to recognize the human rights of people with mental health problems. Twenty years after the dissolution of the Soviet Union, all but one former Soviet country (Turkmenistan) have adopted new mental health legislation (WHO, 2011). Some countries (Azerbaijan, Belarus, the Republic of Moldova, the Russian Federation, Ukraine and Uzbekistan) have also adopted mental health policies or plans of action. The adoption of these legal and policy documents was an important first step towards modernizing mental health care.

The new national documents largely duplicate international mental health policies and human rights legislation, such as the *WHO Mental Health Action Plan for Europe* (WHO, 2005) or relevant United Nations (UN) declarations and conventions (United Nations General Assembly, 1948, 1991, 2006). As such, they meet international requirements. However, because they draw on comprehensive documents targeted at a large number of countries in various stages of development, they are not adapted sufficiently to reflect local needs and resources. Furthermore, national policy documents are often unfocused, setting high expectations in too many priority areas. They also lack pragmatic targets and concrete deadlines for meeting them, and have no funding attached nor mechanisms for monitoring implementation.

These shortcomings of mental health policies in former Soviet countries are indicative of the generally low level of commitment of decision-makers and key stakeholders towards reforming mental health care. While international pressure to initiate change through policy and legislation was justified and positive in its own right, it largely failed to generate substantial reforms of mental health-care systems. Instead, it allowed countries to claim to have met international requirements, formally satisfying requests for action from national and international stakeholders, irrespective of the scale of implementation. So far, progress in implementing reform has been mainly confined to areas that benefited from technical and financial support from international agencies, such as setting up pilot community mental health centres, advocacy for the

human rights of patients with mental illness and developing curricula for primary care staff.

Organization and provision of mental health care

The organization of mental health services is broadly similar across the former Soviet countries. There is a crucial distinction between specialist mental health care (provided in outpatient and inpatient facilities) and mental health services provided in primary health care.

Specialist mental health care

Specialist mental health services are mainly provided in old-fashioned outpatient facilities and large psychiatric hospitals. However, available resources vary greatly, both in terms of facilities and health professionals.

Most outpatient care in countries of the former Soviet Union is provided in dispensaries or polyclinics. According to data collected for the 2011 WHO *Mental Health Atlas* (WHO, 2011), the number of outpatient mental health facilities per 100 000 population ranged from 3 in the Russian Federation and 1.5 in the Republic of Moldova to only 0.1 in Azerbaijan and Uzbekistan, which was significantly below the median of the WHO European Region of 1.47. Except for the Russian Federation and Belarus, the remaining former Soviet countries also have significantly fewer day treatment facilities per 100 000 population than the European median of 0.3. The services provided in these facilities are often limited to the prescription of medication, based on very brief consultations or previous prescriptions.

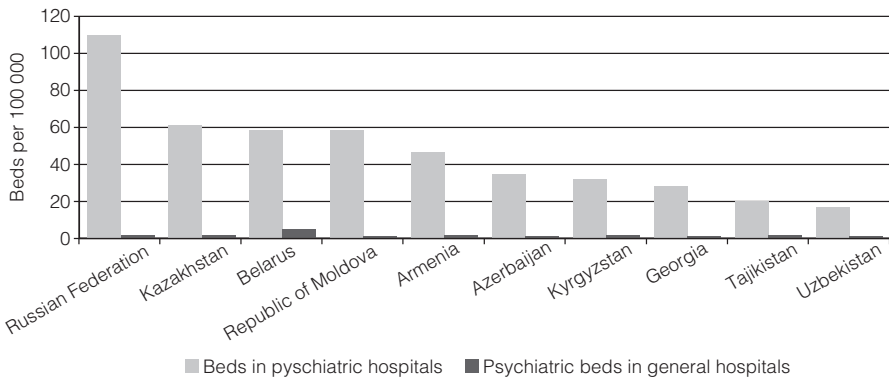
Pilot community mental health centres have been set up in some countries, such as Armenia, the Republic of Moldova, the Russian Federation and Ukraine (Swiss Agency for Development and Cooperation, 2011; Association SOMATO, 2012; Mental Health Foundation of Armenia, 2012). However, comprehensive data are lacking on the availability of community mental health centres in the former Soviet countries. Funded by international donors, such as the Swiss Agency for Development and Cooperation, the Geneva Initiative on Psychiatry and (in the Republic of Moldova) the Stability Pact for South Eastern Europe, pilot community mental health centres were expected to serve as examples of good practice and induce changes in mental health systems. Donors expected that, after the initial phase of international funding, the centres would be taken over by national or local authorities and integrated into the existing system. Moreover, there was an indirect expectation that these centres would be replicated throughout the system and funded by national resources.

Many of these expectations did not materialize. Until now, the mental health systems in the former Soviet countries were unable to replicate pilot centres using their own resources. While there are examples of such initiatives, such as in the Moldovan town of Balti (Global Initiative on Psychiatry, 2011), scaling them up would require resources that are still far beyond the budgets of national health systems, in terms of both providing the physical space and training and employing multidisciplinary staff. Asking social services and local authorities to provide housing in the form of shelters or protected homes is also largely unrealistic due to budget constraints. In many of the former Soviet countries classified by the World Bank as low-income (Kyrgyzstan and Tajikistan) or lower middle-income (Armenia, Georgia, the Republic of Moldova, Ukraine and Uzbekistan) economies, employed middle-class people struggle to meet the costs of housing and generally live in challenging conditions. In this context, it is difficult to convince state authorities of the need to offer people with mental health problems what they cannot afford to give to any other population group, with or without disabilities or special needs.

Most inpatient services are provided in psychiatric hospitals, although there are a few exceptions, where mental health care is also available in general hospitals (Fig. 10.1). Large psychiatric hospitals are the main beneficiaries of mental health budgets, receiving between 71% of the total in Georgia and 88% in Armenia, according to data collected for the 2011 WHO *Mental Health Atlas* (WHO, 2011). These rates are significantly higher than in other European countries and compare to a European median of 60%.

There are noticeable disparities in the provision of inpatient care between countries. According to data collected for the 2011 WHO *Mental Health*

Fig. 10.1 *Psychiatric beds in psychiatric hospitals and general hospitals, per 100 000 population*



Source: based on data from the WHO Mental Health Atlas (WHO, 2011).

Note: no data available for Turkmenistan and Ukraine.

Atlas (WHO, 2011), the number of beds in psychiatric hospitals per 100 000 population ranged from as many as 110 in the Russian Federation to around 60 in Kazakhstan, Belarus and the Republic of Moldova, 28 in Georgia, and 17 in Uzbekistan. The European median was 39.4. Although not captured in the *Mental Health Atlas*, a high number of beds in psychiatric hospitals (86 per 100 000 in 2011) has also been noted in Ukraine. In contrast, the rates of psychiatric beds in general hospitals were fairly low across the region and significantly lower than in other European countries. They ranged from 4.7 per 100 000 population in Belarus to 0.1 in Azerbaijan, while the European median was 10.5 (Fig. 10.1).

In addition to care provided within the (mental) health system, people with mental health problems are also admitted to other types of institutions, namely *internaty* (care homes/asylums) that are the responsibility of ministries for social welfare and national authorities for people with disabilities. There are no data on the rate of psychiatric beds in *internaty* but such institutions are present in most former Soviet countries and there are indications that the number of people with mental health problems admitted to them is on the rise. With the initiation of reforms of mental health care, psychiatric hospitals are under pressure to decrease the number of beds, as well as the length of stay. In the absence of community-based alternatives, mental health professionals in some countries encourage families to admit people with severe and enduring mental health problems to *internaty* (Jenkins, Klein & Parker, 2005; Mundt et al., 2012). Sometimes, they even facilitate the necessary paperwork. Furthermore, when psychiatric hospitals are closed, patients deemed most severely ill are in some cases moved to *internaty*, while patients with less challenging health problems are referred to other psychiatric hospitals.

While health authorities, often working with international donors, are struggling to reform the mental health services under the authority of ministries of health, the large proportion of people with severe learning disabilities who are admitted to *internaty* are ignored. This situation is well known by all stakeholders but little or nothing is being done to address it. This means that the old Soviet practice of hiding people with disabilities continues to persist in the practice of relocating them from mental hospitals to *internaty*. So far, this group has been ignored by psychiatric health reforms and they continue to receive care not too different from that in the Soviet era.

Mental health in primary care

Under the Soviet model of care, people with mental health problems were referred directly to specialized services. Following the reforms, primary care has

acquired increasing responsibility as a gatekeeper for specialized services in all areas of health, including mental health.

Introducing mental health care into primary care is a priority imperative for those reforming mental health services in many former Soviet countries. There are many reasons behind the demands on family doctors to take on responsibilities in mental health. To start with, it is expected to facilitate the shifting of services towards communities, alongside the development of community-based alternatives for specialist services. Introducing mental health care in primary care can offer people with common mental health problems low-threshold access to services that could identify, diagnose and treat these conditions. It is also congruent with the anti-stigma and deinstitutionalization agenda – cornerstones in the modernization of mental health systems. Finally, tapping into the resources of primary care is seen as a means of dealing with the shortage of mental health specialists.

Despite agreement among lead specialists and international pressure to pursue this component of mental health reforms, introducing mental health services in primary care faces a number of challenges. First, the capacity of primary care staff to provide mental health services is limited. In Armenia, Kazakhstan and the Russian Federation, family doctors are not allowed to diagnose or treat people with mental health problems. They are not authorized to prescribe psychotherapeutic medication, either on their own initiative or on the basis of recommendations from specialists. Doctors in the Republic of Moldova and Uzbekistan are authorized to do so but only under certain conditions. In contrast, family doctors in Azerbaijan, Belarus and Georgia are authorized to both diagnose and treat people with mental health problems. However, nurses in primary health care are not allowed to take on any role in mental health care.

Secondly, regardless of whether they are authorized to provide mental health care, the competencies of primary care staff in mental health are limited due to insufficient training. In some countries (e.g. Azerbaijan, Kyrgyzstan and Uzbekistan), family doctors receive some training in mental health with technical and financial support from WHO. In other countries – for example the Republic of Moldova (Galbur, 2010) and Ukraine – some mental health courses are included in the basic training of family doctors. In the Russian Federation, training courses are reportedly carried out at regional level (Zakroyeva et al., 2008). However, across the region there are hardly any courses in mental health for nurses working in primary care. In view of these limited competencies in primary health care, but also due to a fear of losing budget funding, psychiatrists are often reluctant to delegate responsibilities for diagnosing and treating people with mental health problems to primary care staff. Links with specialized services are poorly developed and in most countries

referral mechanisms are not in place. Psychiatrists tend to advise their patients to return to specialists for regular check-ups, sometimes justifying this with the need for ensuring continuity of care. Consequently, few patients entrust their family doctors with the task of coordinating their care.

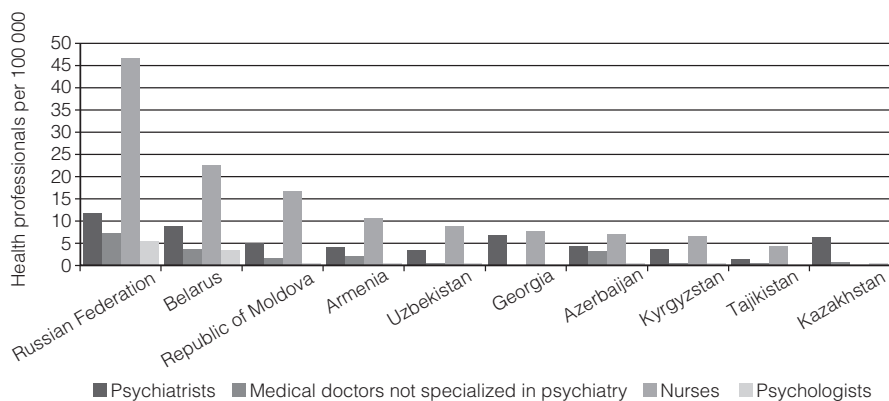
Thirdly, even where mental health specialists would like to engage with family doctors, they are already overburdened and reluctant to take on more responsibilities.

Finally, while intended to mitigate the stigmatizing impact of institutional care, transfer of mental health services to primary care raises concerns with regard to the protection of the human rights of patients, as long as mechanisms to monitor the implementation of legal guarantees or to deal with complaints regarding violations of patients' rights remain largely unavailable.

Human resources

Human resources working in mental health services also vary greatly across countries (Fig. 10.2). According to data collected for the 2011 WHO *Mental Health Atlas* (WHO, 2011), the Russian Federation had around three times more psychiatrists per 100 000 population than Uzbekistan, Armenia or Azerbaijan, and more than six times more nurses working in mental health care per 100 000 population than Azerbaijan and Georgia. The Russian Federation and Belarus have more psychiatrists per 100 000 population than the European

Fig. 10.2 Health professionals working in the mental health sector, rate per 100 000 population



Source: based on data from the WHO mental health atlas (WHO, 2011).

Note: no data available for Turkmenistan and Ukraine.

median of 8.6, while the other countries have significantly fewer. Psychologists are providing mental health services mainly in the Russian Federation and Belarus (with rates of 5.4 and 3.4, respectively, per 100 000 population). Although not captured in the *Mental Health Atlas*, the number of psychiatrists in Ukraine in 2011 was 7.2 per 100 000, with medical doctors not specialized in psychiatry numbering 0.5, nurses 28.6 and psychologists 1.3. Overall, there are very few psychologists working in the former Soviet countries and there are also very few social workers working in mental health services.

Few reliable data are available on the number of mental health professionals emigrating from former Soviet countries. However, unofficial reports indicate that, as in other sectors of society, many mental health professionals from low-income countries emigrate to Kazakhstan and the Russian Federation. Their Russian language skills, as well as the similarities between education and health systems across the former Soviet countries (all an inheritance of the Soviet era), allow them to practise their specialty without too many problems.

Adequacy and quality of mental health services

Adequacy

In Europe, it is largely accepted that a comprehensive range of mental health services in line with current evidence and international best practice would consist of (McCulloch & Muijen, 2011):

- modern inpatient care in therapeutic environments, with all older institutions having been closed;
- specialized and more general community-based teams delivering home care, outreach to primary care, crisis services, assertive outreach and early intervention;
- 24-hour nursing care, residential care and supported housing for people with severe mental health problems who need it; and
- daytime activities and social support directed at rehabilitation and social inclusion.

Such a comprehensive system of services is expected to deliver a range of health and social care interventions, including medication, psychotherapy, social support and advice, and nursing care. The former Soviet countries have a long way ahead before being able to make such a complex model of modern mental health services available to people with mental health problems. Setting up new models of care will take a long time and will require substantial financial

investments (Ougrin, Gluzman & Dratcu, 2006; Cheian-Andrei, 2011; Krasnov & Gurovich, 2012).

However, on a positive note, utilization patterns are changing. For example, the length of stay in psychiatric hospitals is decreasing. According to data provided by countries to WHO for its 2011 *Mental Health Atlas*, over 90% of patients in Belarus and Uzbekistan are discharged within a year from admission. In the Russian Federation and Georgia, discharge rates are slightly lower (76% and 57% respectively). In contrast, the length of stay continues to be much longer in the Republic of Moldova, where 64% of patients are admitted to inpatient facilities for more than a year, with most of them spending up to five years in inpatient facilities.

Quality

There is widespread recognition of the poor quality of mental health services in the former Soviet countries. The persistence of Soviet practices is a particular challenge, for example in the treatment of people who are addicted to alcohol or illicit drugs. Completely ineffective or even harmful treatments are still common and Russian officials have strongly opposed substitution treatment for opiate dependence (Rechel et al., 2011; Platt et al., 2013). In 2008, lead specialists from eight countries of the region identified the 'poor conditions of mental health facilities with sometimes poor availability of food and medication, causing neglect and violation of human rights' as a key challenge for the provision of mental health services (WHO, 2008). They also noted that the quality of mental health services will be difficult to improve, as long as the workload of mental health specialists is too high and there is a lack of professionals.

Conclusion

As this chapter has shown, mental health services in the former Soviet countries still have a long way to go until they catch up with the rest of Europe. Instigating genuine and lasting changes will require complex measures, as well as the credible commitment of national decision-makers. It is not an impossible target, but with reforms still at an early stage of development and implementation and slim prospects for the allocation of sufficient national resources, for the foreseeable future modern mental health services will remain largely out of reach for most people in the region.

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Chapter 11

Health system performance

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Introduction

The *World Health Report 2000* identified three broad health system goals: to improve the health of the population, to respond to the reasonable expectations of the population and to collect funds in a fair way (WHO, 2000). Health system performance refers to how far health systems achieve each of these goals relative to the country's overall context (Durán et al., 2012).

However, assessments of health system performance are far from straightforward. In addition to the methodological challenges intrinsic to this area of work, there is a particular lack of rigorous assessments of health system performance in the former Soviet countries. A key challenge is the lack of reliable and high quality data, such as vital statistics. At the end of 2003, completeness of data on cause of death for the period from 1981 to 1999–2001 (depending on country) was only 60% in Tajikistan, 68% in Armenia, 74% in Azerbaijan, 75% in Georgia, 89% in Kazakhstan and 84% in Kyrgyzstan (Mathers et al., 2005). In Georgia, data completeness has further deteriorated since then, falling to 47% in 2010 (WHO, 2014b). The lack of quality data undermines efforts to assess and improve health system performance in the region (Glonti & Rechel, 2013). However, it is worth noting that some countries (including Kyrgyzstan, the Republic of Moldova and Tajikistan) hold joint annual reviews and health summits, at which the performance of the health system is discussed.

This chapter explores key dimensions of health system performance, drawing on the health system review template used by the European Observatory on Health Systems and Policies (Rechel, Thomson & van Ginneken, 2010). It begins by assessing how the former Soviet health systems are performing in the areas of financial protection and equity in financing. The chapter then reviews

available information on user experience and equity of access. This is followed by a discussion of health outcomes, health service outcomes and quality of care. The chapter then considers health system efficiency, followed by a discussion of transparency and accountability. A concluding section brings together key findings.

Financial protection and equity in financing

The health system goal of 'fair financing', as set out in the *2000 World Health Report*, can be further disaggregated into the goals of improving financial protection and ensuring equitable health financing (Durán et al., 2012).

Financial protection

Financial protection from catastrophic expenditure on health is a fundamental health system objective (Smith, Mossialos & Papanicolas, 2012). It measures the extent to which individuals are protected from the financial consequences of illness.

In many former Soviet countries, this has been a major area of concern, due to the drastic decline in government funding for health that occurred in the 1990s that has still not been reversed in many countries when measured as a percentage of GDP. This drop in public financing was most acute in those countries whose economies were worst affected by the dissolution of the Soviet Union, i.e. in central Asia and the south Caucasus, leading to a growing share of private health expenditure in the form of high levels of (often informal) OOP payments by patients. Although some countries, such as Belarus, Kyrgyzstan, the Republic of Moldova and the Russian Federation, have given priority to increasing the allocation of public funds to the health sector, the share of private expenditure remains substantial (see Chapter 4).

The reliance on private OOP payments for health services and pharmaceuticals in many countries of the region, coupled with inadequate risk pooling, has led to a high risk of catastrophic or impoverishing health expenditure, even for higher income households. A study of catastrophic health expenditure (defined as being present when expenditure on health exceeds 40% of income remaining after subsistence needs have been met) in 59 countries found Azerbaijan having one of the highest levels, reaching 7.15% in 1995, only exceeded by Vietnam and Brazil (Xu et al., 2003). A study of 10 countries in eastern Europe and the former Soviet Union demonstrated the scale of the problem, with OOP expenditure increasing the poverty headcount (using a US\$ 2.15-a-day poverty line at 2000 prices and purchasing power parities) by 2% on average, with the

highest increases in Armenia (3.4%), Georgia (3.6%) and Tajikistan (3.3%) (Alam et al., 2005). A more recent analysis of household surveys in 11 eastern and central European countries also found that a large share of households in post-Soviet countries faced catastrophic OOP expenditure (Smith & Nguyen, 2013). The reliance of these countries on OOP spending had a significant impact on the incidence of catastrophic spending, explaining about half of the cross-country variation. The study also found a high incidence of impoverishing OOP expenditure. Based on a poverty line of US\$ 2.50 per day, private OOP expenditure on health increased the poverty headcount by 1.5–3% in Armenia, Azerbaijan, Kyrgyzstan, the Republic of Moldova, Tajikistan and Ukraine (Smith & Nguyen, 2013).

A survey in eight post-Soviet countries conducted in 2010 confirmed that most respondents who used health services paid OOP, although there was substantial variation across countries, with median amounts varying from \$13 in Belarus to \$100 in Azerbaijan. There were also major differences in terms of what was paid for. Payments for inpatient care and pharmaceuticals were common, but only 5.7% of respondents in the Russian Federation reported payments for outpatient care, compared to 43.6% in Kazakhstan (Balabanova et al., 2012) (Table 11.1).

In addition to the persistence of informal payments, the limited breadth, scope and depth of benefit packages is a major reason for low levels of financial protection in some of the former Soviet countries. Outpatient pharmaceuticals are a particular challenge, as in many countries they are not covered by benefit packages. A secondary analysis of household surveys in 11 eastern and central European countries found that expenditure on drugs accounted for as much as 75% of household expenditure on health in the Republic of Moldova and more than 50% in Kyrgyzstan, Tajikistan and Azerbaijan (Smith & Nguyen, 2013). Many countries of the region have recognized this problem and have attempted to improve financial protection by adopting and expanding state-guaranteed benefit packages, in some cases extending them to outpatient drugs. All countries of the region, except Azerbaijan (which introduced formal user fees but abolished them in 2008) and Belarus, have responded by defining benefit packages of health services guaranteed for free (positive lists), as well as chargeable health services (negative lists), for which user fees were introduced (Rechel & McKee, 2009; Gotsadze & Gaál, 2010; Ibrahimova et al., 2010; Richardson et al., 2013). Particular attention was paid to protecting certain vulnerable groups in the population, such as mothers and children (Rechel & McKee, 2009), although others, such as irregular migrants, remain seriously disadvantaged. Moreover, health facilities in most former Soviet countries were allowed to charge for specified health services.

Table 11.1 Proportion of respondents having to make a payment for obtaining health care and the median amounts paid (US\$), by country (n=2 639)

	Outpatient costs			Inpatients costs			Drug costs			Transport costs			Total costs for health care and drugs ^a (outpatient and/or inpatient and/or drugs)			% of annual GDP ^b
	% ^c (N)	Median US\$ (95% CI)		% ^c (N)	Median US\$ (95% CI)		% ^c (N)	Median US\$ (95% CI)		% ^e (N)	Median US\$ (95% CI)		% ^d (N)	Median US\$ (95% CI)		
Azerbaijan	78.4 (98)	24.91 (18.68; 32.44)		17.1 (13)	171.89 (47.82; 621.82)		86.2 (100)	74.74 (62.28; 87.19)		77.0 (107)	3.74 (2.49; 3.74)		97.5 (158)	99.65 (74.74; 118.31)		1.03
Georgia	59.1 (218)	17.15 (14.29; 22.86)		11.9 (17)	114.32 (17.21; 228.64)		88.1 (266)	28.58 (28.58; 38.30)		69.8 (226)	1.14 (1.14; 1.71)		96.9 (342)	39.44 (34.30; 52.22)		0.83
Ukraine	52.0 (146)	12.57 (9.20; 13.47)		25.6 (35)	62.84 (29.37; 188.52)		80.8 (206)	18.85 (12.57; 25.14)		50.8 (123)	0.75 (0.52; 1.26)		95.5 (296)	28.53 (21.39; 36.95)		0.45
Armenia	43.7 (80)	11.55 (9.24; 23.10)		28.2 (24)	92.17 (19.20; 354.29)		86.0 (154)	18.48 (16.17; 23.10)		61.9 (96)	1.16 (0.46; 2.31)		97.0 (193)	23.10 (18.48; 34.53)		0.44
Republic of Moldova	36.6 (142)	12.06 (8.04; 16.08)		29.0 (27)	64.34 (31.62; 89.01)		91.2 (279)	21.71 (17.38; 24.13)		93.4 (199)	1.21 (0.80; 1.61)		96.3 (421)	23.64 (19.62; 27.64)		0.83
Kazakhstan	28.6 (76)	10.75 (4.75; 14.93)		43.6 (116)	0.04 (0.04; 0.04)		77.8 (207)	13.56 (13.56; 16.99)		69.9 (186)	0.68 (0.54; 0.81)		85.3 (227)	16.99 (13.57; 20.38)		0.15
Russian Federation	19.0 (91)	28.82 (18.86; 39.61)		5.7 (16)	43.39 (22.09; 151.95)		70.4 (299)	22.04 (20.27; 27.12)		49.7 (189)	1.22 (0.95; 1.70)		85.9 (440)	32.34 (26.92; 33.90)		0.17
Belarus	13.7 (47)	8.91 (6.60; 15.65)		42.1 (8)	34.65 (9.45; 76.31)		93.4 (241)	9.90 (8.25; 13.20)		78.3 (137)	0.46 (0.46; 0.66)		98.6 (348)	12.54 (9.90; 13.20)		0.10

Source: Balabanova et al., 2012.

Notes: CI, confidence interval. Data include both formal and informal payments as it can be difficult for health-care users to clearly distinguish between them. Exchange rates to US\$ used from the period of data collection. The median amounts exclude zero values (i.e. when no payment was made).

^aTotal for outpatient, inpatient and drugs costs combined (note that respondents may have paid for more than one type). ^bBased on 2009 GDP per capita data. ^cProportion of all respondents in each category who had to make a payment. ^dProportion of all respondents who used health care who had to pay for outpatient and/or inpatient and/or drugs.

In some countries, efforts to improve financial protection have yielded positive results. In Kyrgyzstan, the introduction of a single payer system, an expanded state-guaranteed benefit package, the introduction of formal co-payments and patient information campaigns have improved financial protection and reduced informal payments (Kutzin, Jakab & Shishkin, 2009; Falkingham, Akkazieva & Baschieri, 2010). The share of hospitalized patients making informal payments to medical personnel declined from 70% in 2001 to 52% in 2006, attributed in part to greater awareness of patient rights (Ibraimova, Akkazieva et al. 2011). Finally, out-of-pocket payments as a share of household expenditure declined from 7.1% in 2003 in the poorest quintile to 4.4% in 2009 (Ibraimova et al., 2011). However, achieving universal coverage by mandatory health insurance continues to be a challenge in many countries, as exemplified by the situation in the Republic of Moldova, where 20% of the population is not yet covered (Shishkin & Jowett, 2012), with poorer rural populations disproportionately affected (Richardson et al., 2011). In Azerbaijan, the high level of direct patient payments reported in 2010 (Table 11.1) may reflect the lack of a basic benefits package in this country (Ibrahimov et al., 2010), while in Georgia targeting comprehensive cover to only the population living below the poverty line between 2007 and 2013 was an explicit political decision (Chanturidze et al., 2009).

Equity in financing

Financing systems may be progressive, proportional or regressive. The high share of private OOP payments in many post-Soviet countries means that financing tends to be regressive. OOP payments (including informal payments) are often higher in urban areas and for those with higher disposable incomes, which may mitigate the effects slightly, but they remain a highly regressive means of health financing, as poorer households pay a higher proportion of their income than richer households (Falkingham, 2004; Atun et al., 2008; Lekhan, Rudy & Richardson, 2010; Popovich et al., 2011). This is particularly the case for spending on outpatient pharmaceuticals, which is largely from private funds, leading some policy-makers to consider price controls or include pharmaceuticals in benefit packages, at least for the most vulnerable groups in the population. Equity in financing is further undermined in many countries of the region by widespread tax evasion and the existence of large informal economies. In Ukraine, for example, the shadow economy was estimated to amount to 40% of GDP and many wealthy citizens concealed their income from taxation (Tischuk, Kharazishvili & Ivanov, 2011).

The misallocation of resources to different parts of the health system is another barrier to more equitable health financing (see section *Allocative efficiency*). Again, Ukraine can serve as an example – 70% of government expenditure

there goes to hospitals, specialist facilities and sanatoria, facilities that are used considerably less frequently by poorer sections of the population (Lekhan, Rudyi & Richardson, 2010). This was also raised as a concern in Tajikistan, where the bulk of public financing goes to hospitals and services are expensive and out of reach for the poor (Khodjamurodov & Rechel, 2010).

User experience and equity of access

User experience

Users can report how well health systems respond to their legitimate expectations. However, information on public and patient satisfaction with the health system is still sparse in all former Soviet countries. Comparable household surveys in eight former Soviet countries in 2001 and nine in 2010 found generally low levels of satisfaction with the health system: only in Azerbaijan (56%), Armenia (54%), Belarus (52%) and Kazakhstan (51%) were a slight majority quite or definitely satisfied in 2010. In Kyrgyzstan (47%) and Georgia (44%), only a slight minority were quite or definitely satisfied, while in the Republic of Moldova (32%), the Russian Federation (24%) and Ukraine (17%) only a minority were quite or definitely satisfied. Nevertheless, across all countries, the share of respondents who were quite or definitely satisfied increased from 19.4% in 2001 to 40.6% in 2010 (Footman et al., 2013).

There are few patient satisfaction surveys in these countries, with no systems that can consistently and comprehensively capture their views, as has been noted in Armenia (Hakobyan et al., 2006) and Kazakhstan (Katsaga et al., 2012). Where patient satisfaction surveys have been conducted, their interpretation is not straightforward, as high levels of satisfaction may reflect low expectations rather than high quality (Richardson, 2013). In the Russian Federation, for example, one survey found satisfaction highest in Chukotka Autonomous Okrug, which was the Russian region with the lowest health expenditure per capita (Popovich et al., 2011). Similarly, very high patient satisfaction scores were also recorded in surveys in Kyrgyzstan (Ibraimova et al., 2011), while in Belarus 72% of the respondents were found to be satisfied with the quality of care provided in the public sector (Richardson et al., 2013). These findings indicate the need to complement measures of patient satisfaction with more objective measures of quality of care.

Equity of access

Two major barriers to equitable access have emerged in the post-Soviet countries: financial and geographical. The financial barriers associated with

private OOP expenditure particularly affect the poor. In several countries, including Armenia (Richardson, 2013) and the Russian Federation (Popovich et al., 2011), utilization of health services is higher among richer segments of the population, who typically have the least needs. In a 2006 study of five districts in Azerbaijan, the proportion of people with an acute illness who were able to access health services was 52.4% among the poorest quintile, compared to 68.5% among the richest quintile (Ibrahimov et al., 2010). In Tajikistan, utilization of health services in 2004 was more than double in the wealthiest income quintile compared to the poorest quintile. For those reporting chronic diseases, those in the richest quintile were 2.7 times more likely to seek care in 2003 than the poorest quintile. Furthermore, in 2005, only 43.3% of expectant mothers from the poorest quintile delivered at health-care facilities, compared to 80% of those in the richest quintile (Khodjamurodov & Rechel, 2010). The secondary analysis of household surveys in 11 eastern and central European countries mentioned above found that inequalities in the utilization of health services are particularly pronounced in those countries with high OOP expenditure (Smith & Nguyen, 2013).

As a result of these financial barriers to health care, many in need of health services are not able to access it. In 2009 it was reported from Georgia that 18% of respondents in a survey did not consult health services when sick because they could not afford them (Chanturidze et al., 2009). In Kazakhstan in 2008, 7.4% of the population did not use health services because of high costs (Katsaga et al., 2012). In Ukraine in 2013 about 21.6% of households could not access necessary medical care. A survey conducted in Ukraine in 2010 found that approximately 40% of those paying for hospital services had to borrow money or sell assets, while about 60% of respondents who thought they needed care forewent services. Inability to pay mainly affected those with poor health or low incomes (Tambor et al., 2014). In Armenia, the 2010 Demographic and Health Survey found that 50% of women and 40% of men did not seek primary care services when they needed them because of high costs (Richardson, 2013). In Tajikistan, 54% of survey respondents in the poorest region postponed seeking health care because of their inability to pay the informal costs of services (Khodjamurodov & Rechel, 2010). As a result people may turn to traditional healers or self-treatment (Stickley et al., 2013). However, there are also improvements in some countries. In Kyrgyzstan, for example, the percentage of people who needed health care but did not seek it because it was too expensive or too far away fell from 11.2% in 2000 to 4.4% in 2009 (Ibraimova et al., 2011).

In a survey conducted in 2010 simultaneously in Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, the Republic of Moldova, the Russian Federation and

Ukraine, almost half of respondents with a health problem in the previous month had not sought care, most often due to the costs involved. However, unaffordability differed widely across countries, ranging from 69.7% in Georgia and 58.1% in Azerbaijan to only 4.6% in the Russian Federation and 2.9% in Belarus (Balabanova et al., 2012) (Table 11.2).

The second major barrier to equitable access in the region is geographical. Health facilities, workers and per capita financing tend to be unequally distributed, with an oversupply in capitals and major cities and shortages in rural areas and in primary health-care facilities; there are also major regional variations within countries. While in Ukraine per capita government health financing in 2013 only varied between regions by a factor of 1.5, in the extreme case of the Russian Federation, it varied among regions by as much as 6.8 times (Popovich et al., 2011). In Kazakhstan in 2001 health expenditure varied by a factor of 4.2 between the richest and poorest regions, narrowing to 2.1 times in 2008 (Katsaga et al., 2012). These large variations are the consequence of decentralized financing systems, leading some countries to pool resources nationally, as in Kyrgyzstan (Ibraimova et al., 2011). In the Republic of Moldova too, regional differences in per capita funding for health decreased following the recentralization of resource pooling (Turcanu et al., 2012).

Many post-Soviet countries have a very uneven distribution of health workers and facilities and many face staff shortages in rural and remote areas and in primary care. In Kazakhstan health-care utilization varies significantly across regions. In 2010, hospitalization levels varied by a factor of 1.7, while outpatient visits per person per year varied by a factor of 1.5 (Katsaga et al., 2012). In Ukraine in 2013, hospitalizations varied by a factor of 1.4 across the country's regions. In the Russian Federation in 2009 the number of physicians per 10 000 population varied from 87.4 in St Petersburg to 25.1 in the Republic of Ingushetia, while the number of beds varied from 177.4 per 10 000 population in Chukotka Autonomous Okrug to 39.8 in the Republic of Ingushetia (Popovich et al., 2011). Variation in the availability of health workers and health infrastructure also exists in Ukraine, where in 2012 the number of physicians varied from 34.3 per 10 000 population in Mykolayiv region to 63.5 in Chernivtsi region, while the number of hospital beds varied from 78.7 in Zhitomir region to 111.5 in Chernihiv region (State Statistical Committee, 2013).

In rural areas in the Russian Federation in 2008 there were only an average of 12.1 doctors per 10 000 population, compared to a national average of 49.6, while in 2009 the availability of hospital beds for rural inhabitants was 2.6 times lower than for the urban population (Popovich et al., 2011). Some countries, such as Belarus and Kyrgyzstan, have resumed the Soviet practice of sending

Table 11.2 Reasons for not seeking health care in a survey in eight post-Soviet countries in 2010

	Self-treatment			Could not afford services			Could not afford drugs			Could not afford either services or drugs		
	%	(95% CI)	N	%	(95% CI)	N	%	(95% CI)	N	%	(95% CI)	N
Georgia	20.8	(17.7; 23.9)	137	66.5	(62.9; 70.1)	438	38.7	(35.0; 42.4)	255	69.7	(66.1; 73.2)	459
Azerbaijan	18.2	(11.9; 24.5)	27	51.4	(43.2; 59.5)	76	16.9	(10.8; 23.0)	25	58.1	(50.1; 66.2)	86
Armenia	24.9	(20.4; 29.4)	89	24.0	(19.6; 28.5)	86	12.8	(9.4; 16.3)	46	27.1	(22.5; 31.7)	97
Republic of Moldova	39.4	(33.5; 45.3)	106	20.1	(15.3; 24.9)	54	15.2	(10.9; 19.6)	41	28.6	(23.2; 34.1)	77
Ukraine	51.2	(46.3; 56.1)	207	16.1	(12.5; 19.7)	65	11.4	(8.3; 14.5)	46	20.5	(16.5; 24.4)	83
Kazakhstan	50.2	(43.8; 56.6)	121	4.1	(1.6; 6.7)	10	5.0	(2.2; 7.7)	12	8.3	(4.8; 11.8)	20
Russian Federation	45.1	(40.4; 49.9)	195	3.5	(1.7; 5.2)	15	2.5	(1.1; 4.0)	11	4.6	(2.6; 6.6)	20
Belarus	52.9	(47.6; 58.1)	185	0.3	(0.0; 0.8)	1	2.9	(1.1; 4.6)	10	2.9	(1.1; 4.6)	10

Source: Balabanova et al., 2012.

Note: CI, confidence interval.

new graduates to underserved areas and many countries have introduced benefits for health workers in rural areas, but these initiatives have often failed to achieve the desired results (Lekhan, Rudyi & Richardson, 2010).

Physical geography is a challenge in some countries. The mountainous terrain of Kyrgyzstan and Tajikistan results in major challenges in providing services to particularly remote rural areas, while the Russian Federation, Kazakhstan, Turkmenistan and Uzbekistan have large expanses of sparsely inhabited territory, with little transport infrastructure. In Tajikistan, for example, many communities in remote mountainous regions are cut off for months during winter, and about 75% of babies born in mountainous regions are delivered at home (Khodjamurodov & Rechel, 2010).

Countries all over the region have sought to maintain access to health services across their territories, as in Uzbekistan where the reformed primary health-care system built on a mapping exercise that sought to achieve an equitable distribution of facilities. However, maintaining geographical access to inpatient secondary care was not a government priority and the number of rural hospitals was reduced significantly (Ahmedov et al., 2007). In many cases, such as in Ukraine, these facilities were turned into outpatient facilities or into facilities for social and long-term care. In Georgia, geographical access to health services is reportedly relatively even across the country despite its mountainous terrain (Chanturidze et al., 2009).

Health outcomes, health service outcomes and quality of care

Population health

Improving population health is the fundamental goal of health systems (WHO, 2000). However, measuring progress is not easy. One of the key concepts used is avoidable mortality (Nolte et al., 2012). A distinction can be made between conditions that can be prevented through wider public health measures and intersectoral collaboration (preventable mortality) and those for which premature death can be avoided by the presence of timely and effective health care (amenable mortality). Amenable mortality is usually defined as deaths below a specified age (typically under 75), largely because of the difficulties in assigning a single cause of death in older people who tend to have multiple disorders.

However, although the data necessary to calculate amenable mortality are available for most of the former Soviet countries, there are problems with accuracy and completeness of demographic and health data. A comparison of amenable mortality in the Russian Federation and the United Kingdom found

that both countries had similar levels of amenable mortality in the mid-1960s but the subsequent steady improvement seen in the United Kingdom did not occur in the Russian Federation, thought to be due to public health measures and the failure of the Soviet system to produce and distribute the treatments that were then becoming available in the west, such as drugs for hypertension, chronic airways disease and heart failure. The study suggested that the achievement of outcomes seen in the United Kingdom would increase male life expectancy in the Russian Federation by 2.9 years (Andreev et al., 2003).

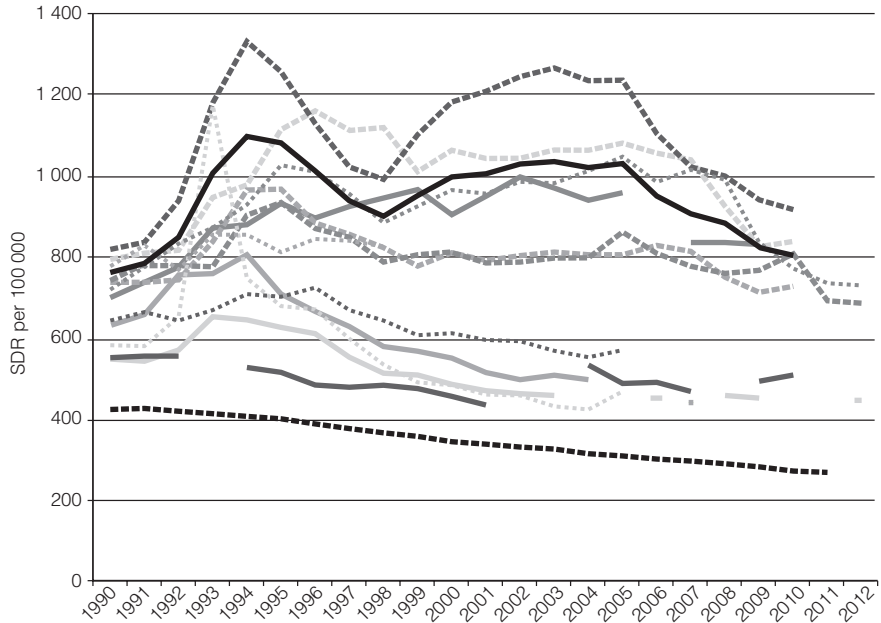
Given the constraints of available data on amenable mortality in the former Soviet countries, here premature mortality (in under 65s) from all causes and from selected amenable causes are used as an indication of how the countries perform in terms of health outcomes. Fig. 11.1 shows directly standardized all-cause mortality rates per 100 000 population for males and females. In 2011 the average rate for males in the 12 post-Soviet countries considered in this volume exceeded the EU average by a factor of three (801 and 269 per 100 000 respectively) and by a factor of two for females (308 and 131 per 100 000 respectively). The inter-country range for males varied from 443 per 100 000 in Azerbaijan to 915 per 100 000 in the Russian Federation, with a decline in post-Soviet countries only being seen in recent years.

In industrialized countries, between 40% and 50% of the decline in ischaemic heart disease in recent decades can be attributed to improvements in health care, while the remainder is due to public health measures addressing main risk factors, such as smoking, diet and physical activity (Nolte, Bain & McKee, 2009). Both of these factors contribute to the growing health gap between the former Soviet countries and those in western Europe since the 1960s. Currently ischaemic heart disease is one of the main contributors to the gap in amenable mortality between the post-Soviet countries and the EU (Fig. 11.2).

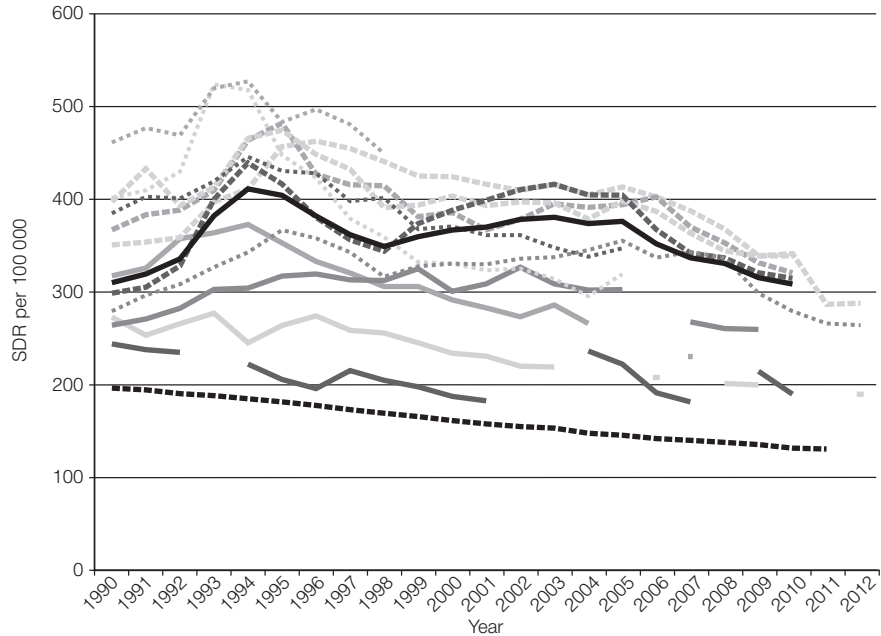
The detection and treatment of hypertension is another area where the performance of the health system impacts on population health. Hypertension is one of the leading causes of avoidable mortality in the former Soviet Union (Roberts et al., 2012). However, surveys have shown that only a very low percentage (less than 10% in many post-Soviet countries) of those with high blood pressure take the necessary medication regularly (Roberts et al., 2012) and treatment rates for those with elevated levels of cholesterol are even lower (Smith & Nguyen, 2013) (see Chapter 7). Some improvements were noted in Kyrgyzstan, where attempts to improve the management of hypertension were associated with an increase in the percentage of adults who visited primary health-care facilities and had their blood pressure checked from 63% in 2006 to 80% in 2009, while the share of patients who were prescribed first-line medications increased from 64% to 79% (Ibraimova et al., 2011). Progress was

Fig. 11.1 All-cause mortality for under-65-year-olds in the former Soviet countries and the EU, 1990–2012

Males



Females



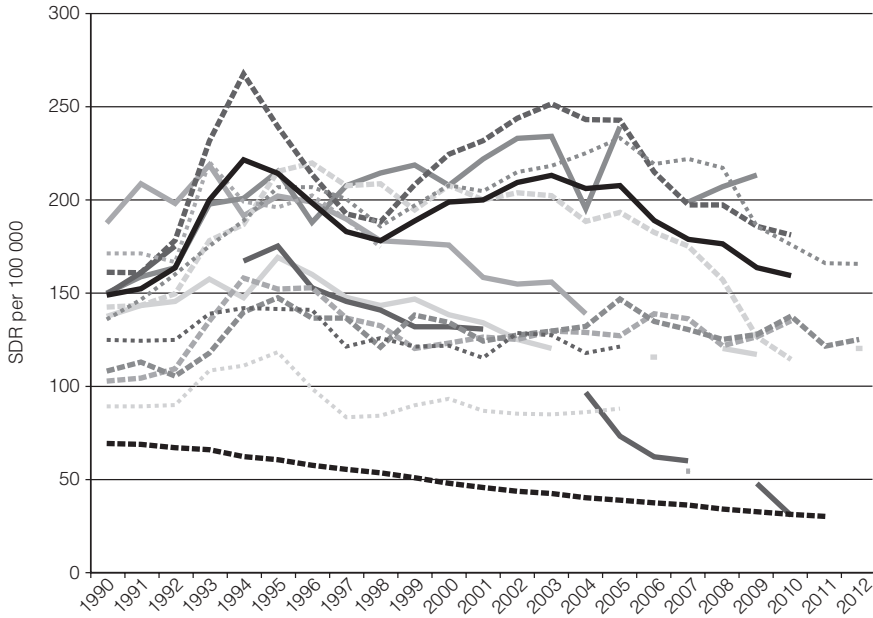
— Armenia — Azerbaijan — Belarus — Georgia — Kazakhstan — Kyrgyzstan
— Republic of Moldova — Russian Federation — Tajikistan — Turkmenistan — Ukraine
— Uzbekistan — EU — CIS

Source: WHO, 2014b.

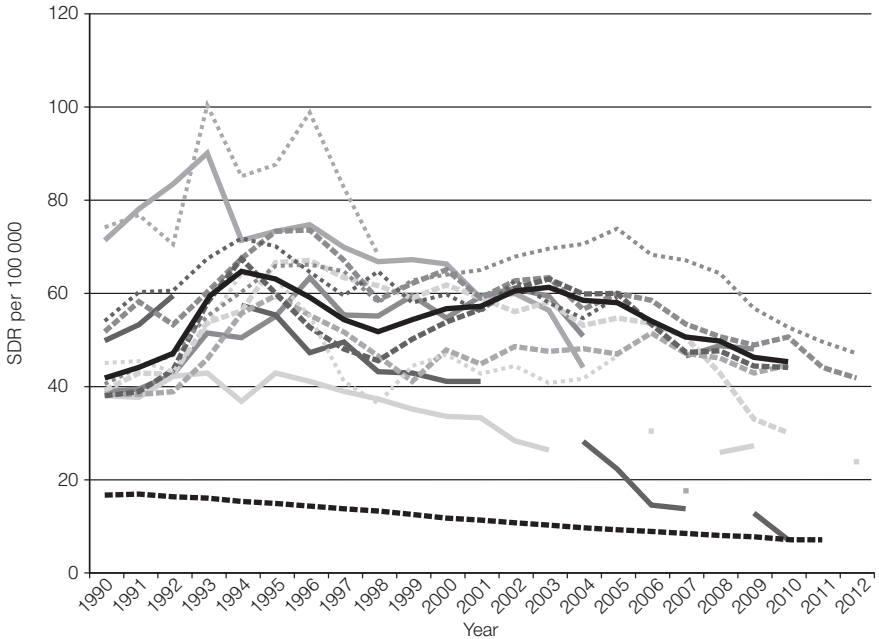
Note: SPR, Standard death rate

Fig. 11.2 Mortality from ischaemic heart disease for under 65s in the former Soviet countries and the EU, 1990–2012

Males



Females



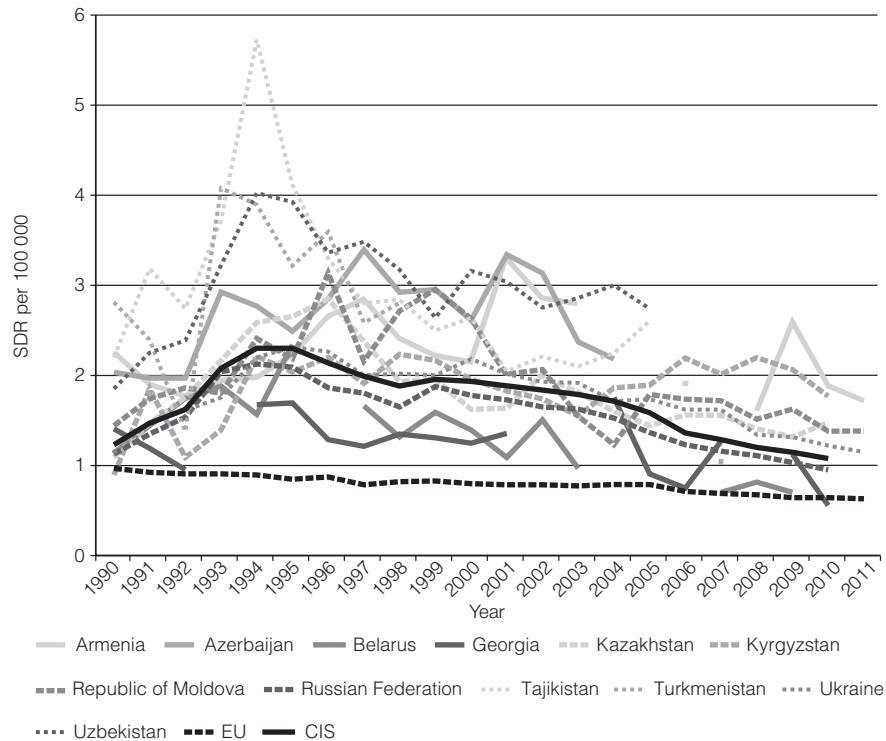
— Armenia — Azerbaijan — Belarus — Georgia — Kazakhstan — Kyrgyzstan
 — Republic of Moldova — Russian Federation — Tajikistan — Turkmenistan — Ukraine
 — Uzbekistan — EU — CIS

Source: WHO, 2014b.

also made in Ukraine, where prices for antihypertensive drugs were reduced and an increased number of patients were provided with diagnosis and treatment. However, even where patients have been given the appropriate prescription, they may not necessarily take the medication daily as required (Roberts et al., 2012).

Another approach to assessing how well health systems perform is to use tracer conditions, such as diabetes, that are common and require a wide range of health system inputs for their effective management. Diabetes exemplifies this, requiring coordinated inputs from a wide range of health professionals, access to essential medicines and a health system that promotes patient empowerment. It thus serves as a useful example for a much larger group of complex chronic conditions (Nolte et al., 2012). Studies in Georgia (Balabanova et al., 2009) and Kyrgyzstan (Beran et al., 2013) have identified failings in human resources (with health professionals lacking necessary skills), physical resources (such as a lack of functioning systems to procure and distribute insulin, unaffordability of glucose monitors and a lack of equipment to provide foot care), and the overall management of resources (with limited follow-up of patients and high OOP payments). Fig. 11.3 shows that, notwithstanding reservations about the quality

Fig. 11.3 Mortality from diabetes in under-50s in the former Soviet countries and the EU, 1990–2011



Source: WHO, 2014b.

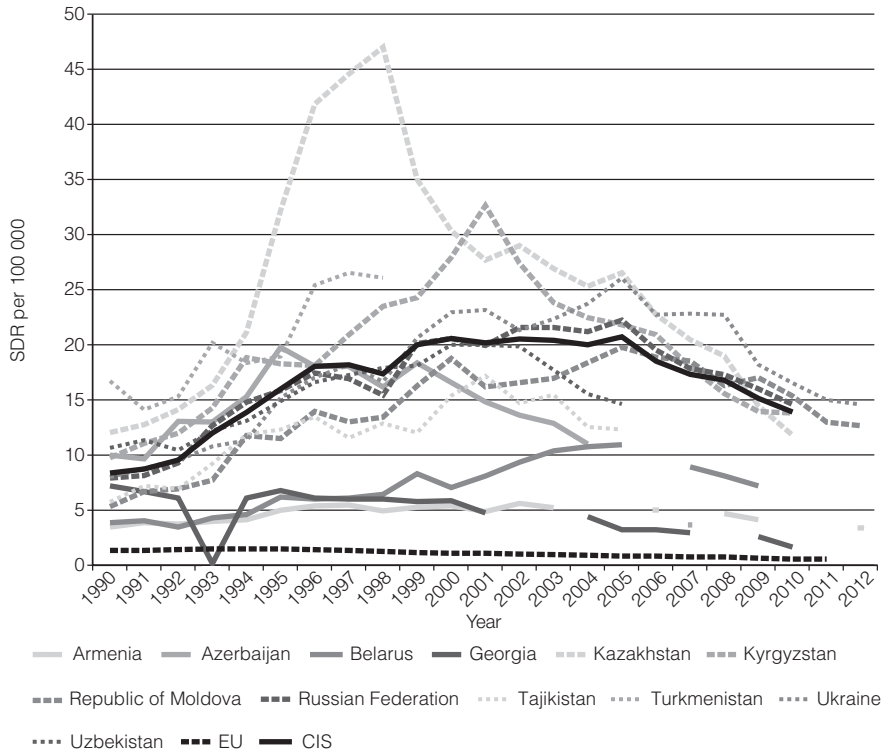
of data, a few post Soviet countries – including Turkmenistan, Uzbekistan and Tajikistan – have much higher death rates from diabetes among under 50 year olds than the EU.

Failures of infectious disease control can also indicate weaknesses in health system performance. Immunization was a traditional strength of the Semashko health system and, after some disruptions in the early years of independence, most post-Soviet countries have restored high rates of immunization (see Chapter 6). However, the control of TB has proved to be much more challenging and the emergence of multidrug-resistant tuberculosis (MDR-TB) and extensively drug-resistant TB (XDR-TB) is an indication of health system failure (Karmali et al., 2008). Several post-Soviet countries, including Azerbaijan (Ibrahimov et al., 2010) and Georgia (Chanturidze et al., 2009) have some of the highest rates of MDR-TB seen anywhere in the world. Reasons include disrupted treatments (in particular when people leave prisons), inadequate domestic funding and coverage, counterfeit drugs, user fees, easy availability of prescription drugs in pharmacies and the absence of any involvement by primary health-care staff (Mosneaga et al., 2008). Mortality from TB in the former Soviet countries plateaued in the early 2000s and has since been slowly decreasing (Fig. 11.4).

Neonatal (in the first 28 days after birth) or perinatal (stillbirths and deaths in the first week of life) mortality has also been used as an indicator of the quality of health care (Nolte, Bain & McKee, 2009). While international comparisons of neonatal or perinatal mortality can be problematic, changes over time within a country can identify successes and failures (Nolte, Bain & McKee, 2009). In Belarus, for example, neonatal care was identified as an area where considerable progress had been made in recent years (Richardson et al., 2013). Improvements in infant and maternal mortality were also noted in other countries, such as the Republic of Moldova (Figs. 11.5 and 11.6). In Kazakhstan, too, progress was made with regard to maternal and child mortality, with improvements in the management of pregnancy, delivery and complications (Katsaga et al., 2012). In contrast, in Georgia one report failed to identify any discernible improvements in neonatal care since 2000 (Chanturidze et al., 2009).

Finally, cancer survival can be used to assess how health systems perform. However, interpretation is complex because of differences in stage at presentation, itself affected by the quality of primary care and existence of screening programmes (Nolte, Bain & McKee, 2009). Thus, while there are many problems in making international comparisons in these countries, changes in cancer survival rates within a country may be meaningful (Nolte, Bain & McKee, 2009). Information on cancer survival rates in the post-Soviet countries is scarce. In Belarus, five-year survival for patients diagnosed with prostate cancer in 2000–2004 was 43.0%, as compared to 64.5% in Lithuania (Richardson et al., 2013).

Fig. 11.4 Mortality from TB in under-65s in the former Soviet countries and the EU, 1990–2012



Source: WHO, 2014b.

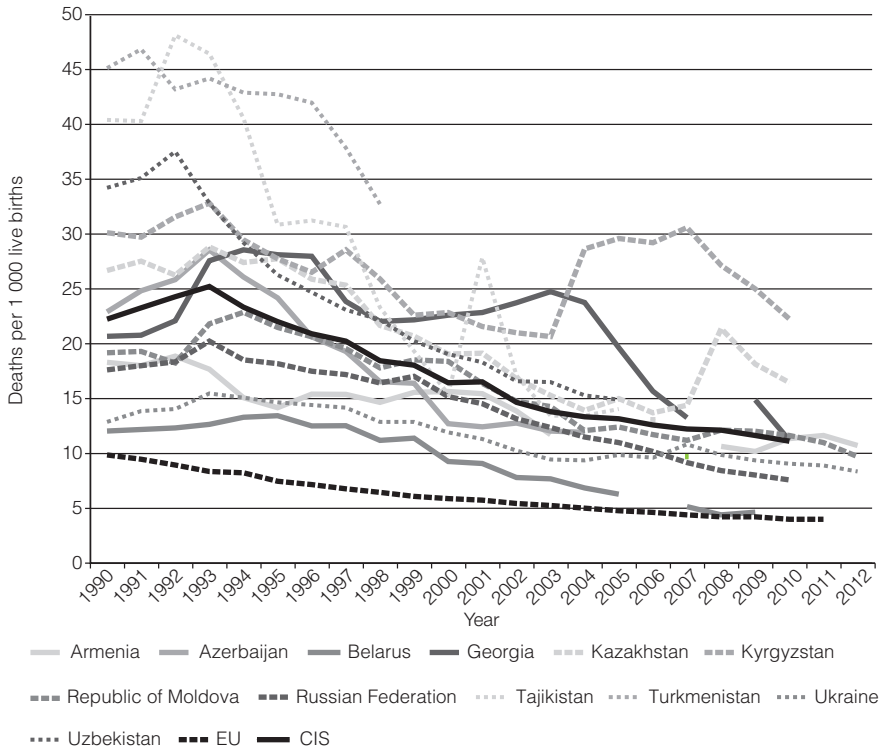
It is noteworthy that the richer former Soviet countries, in particular the Russian Federation and Kazakhstan, have very poor health outcomes relative to their resources and health spending (Popovich et al., 2011).

Health service outcomes

In western countries there is increasing use of patient-reported outcome measures (Smith, Mossialos & Papanicolas, 2012). However, these are not yet routinely collected in post-Soviet countries (Richardson, 2013; Richardson et al., 2013).

Quality of care

Despite a lack of robust data, quality of care has emerged as a major concern across the region. The reasons for poor quality are many and include a lack of investment in facilities and technologies, insufficient supply of pharmaceuticals, poor training of health workers, underdeveloped patient rights, absence of

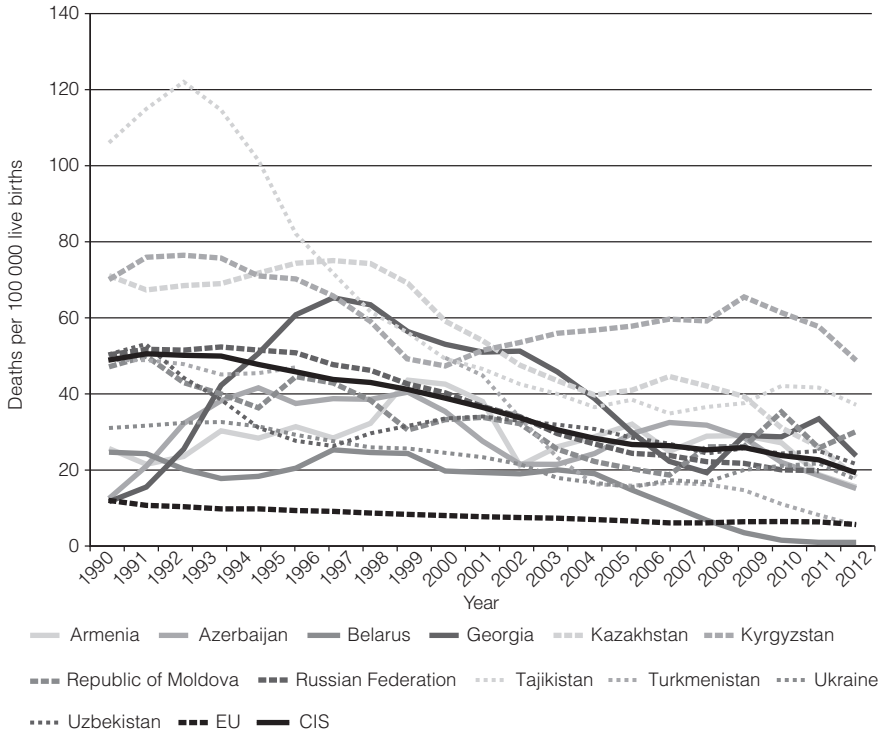
Fig. 11.5 *Infant mortality in the former Soviet countries and the EU, 1990–2012*

Source: WHO, 2014b.

systems for quality improvement, the paucity of locally generated evidence, inadequate access to the international literature, widespread OOP payments (encouraging expensive and unnecessary treatments), poor integration of different levels of care and the persistence of incentives to hospitalize patients (Guindon et al., 2010; Rechel et al., 2011, 2013). Consequently, there is considerable over-diagnosis and use of ineffective remedies (Duke et al., 2006). In several countries harmful practices, such as overuse of injections and infusions and persistence of obsolete treatments are common (Ahmedov et al., 2007).

Several problematic areas of medical practice have been identified. One is obstetrics, where expectant mothers with normal pregnancies are often admitted for several weeks and given infusions of vitamins, minerals and other substances with no therapeutic value (Danishevski, McKee & Balabanova, 2008a,b). Many infants in the former Soviet countries who would be classified as normal in international practice are subject to extensive surveillance and, in some cases, multiple treatments. Children with developmental disability are offered exotic treatments, often at high personal cost to the family (Duke et al.,

Fig. 11.6 *Maternal mortality in the former Soviet countries and the EU, 1990–2012, 3-year averages*



Source: WHO, 2014b.

2006). Unnecessary and prolonged hospitalization of children is very common, with widespread use of ineffective therapies (Rechel et al., 2011). Outdated treatment methods for drug addiction are another concern, contributing to the HIV epidemic (Rechel et al., 2011). Existing services for drug users are based on social control and law enforcement but, with rare exceptions, do little to treat addiction (Elovich & Drucker, 2008).

The lack of mechanisms to improve patient safety and quality of care, such as systems of medical error reporting, has been noted in several countries, including Armenia (Hakobyan et al., 2006), Azerbaijan (Ibrahimov et al., 2010), Georgia (Chanturidze et al., 2009), the Republic of Moldova (Atun et al., 2008), Tajikistan (Khodjamurodov & Rechel, 2010) and Ukraine (Lekhan, Rudyi & Richardson, 2010). There have been many attempts to improve quality and establish evidence-based practice, with success in a number of pilot projects (Nugmanova et al., 2008) but they have been difficult to scale up in the presence of entrenched Soviet-era concepts of evidence (McKee, 2007) and outdated training curricula (Asadov & Aripov, 2009). However, there are some encouraging examples. In Kyrgyzstan, involving local communities and NGOs

in the development and implementation of quality improvement programmes has proved to be very effective (Ibraimova et al., 2011). In Kazakhstan, a monitoring system for quality in inpatient and outpatient care was introduced in 2009 and there was also significant progress in introducing and promoting evidence-based medicine principles (Katsaga et al., 2012). In the Republic of Moldova, 147 clinical protocols for primary care services had been developed by 2012 within assistance projects supported by USAID, EU and the World Bank (Turcanu et al., 2012).

Modern, evidence-based medicine and clinical practice guidelines are increasingly being introduced in the region, for example by evidence-based medicine centres being established in a number of countries and with the support of bilateral and international agencies, such as USAID or the World Bank. However, many are limited to a few priority programmes, such as mother and child health or primary health care. Even where evidence-based clinical guidelines have been adopted, mechanisms for their implementation may be lacking. Human resources are another challenge. In many countries, health workers lack the training, skills and incentives to improve quality of care and patient satisfaction (Atun et al., 2008; Ibrahimov et al., 2010; Khodjamurodov & Rechel, 2010; Lekhan, Rudiy & Richardson, 2010).

Equity of outcomes

Information on equity of health outcomes is only available for some of the post-Soviet countries. In Kazakhstan there are significant variations among *oblasts* in terms of life expectancy, infant mortality, maternal mortality and TB morbidity. In this country, life expectancy at birth in 2009 varied from 66.2 in Akmola *oblast* to 75.7 in Astana city (Katsaga et al., 2012). Large inequities among regions were also noted in the Russian Federation, with three- to fourfold differences in perinatal and infant mortality. Life expectancy in 2009 ranged from 64.2 years in Chukotka Autonomous Okrug to 81.3 years in Ingushetia (Popovich et al., 2011). There were also large differences between urban and rural populations, with life expectancy in rural populations in 2009 being 66.7 years compared to 69.4 years for urban populations, as well as a substantial gender gap (Popovich et al., 2011). In Ukraine significant regional differences can also be observed in terms of life expectancy, infant mortality and TB morbidity. In 2012 life expectancy at birth in Ukraine ranged from 69.6 in Kirovograd region to 74.1 in Kiev. Regional differences in infant mortality rates varied by a factor of 2.2, from 5.7 per 1000 live births in the Kiev region to 12.6 in the Donetsk region, while TB rates varied by a factor of 2.6, from 41 per 100 000 population in Kiev to 108.1 in Kherson region (State Statistical Committee, 2013).

Health system efficiency

Measuring health system efficiency is particularly challenging (Smith, Mossialos & Papanicolas, 2012). This is especially so in many post-Soviet countries, where insufficient robust data are available to assess efficiency, limiting the development of more efficient ways of allocating resources. Two principal, and partially overlapping, components of health system efficiency can be distinguished: allocative efficiency and technical efficiency.

Allocative efficiency

Allocative efficiency indicates how funds are allocated to achieve an appropriate mix of health services. However, given the important role of private health expenditure in many post-Soviet countries, allocation of resources for health is only partly within the power of the government.

One of the main areas of concern has been the over-reliance on hospital care and the neglect of primary health care. All former Soviet countries have embarked to varying degrees on attempts to strengthen primary health care and thus use resources more efficiently (Rechel & McKee, 2009). Most commonly, however, the Soviet model of primary health care, delivered by poorly trained doctors able to treat a narrow range of conditions, has been retained and primary health care based on a model of comprehensive family medicine is confined to pilot sites or rural areas. Exceptions are Kyrgyzstan and the Republic of Moldova (see Chapter 7).

Conversely, most countries still have significant excess capacity in hospitals (see Chapter 8). Faced with an acute funding shortage, countries scaled back the extensive provision of hospital capacity they had inherited from the Soviet era. Bed numbers in acute hospitals dropped substantially in the 1990s but in most countries of the region still far exceed levels in the EU. In all countries bed numbers fell because many small hospitals, especially in rural areas, were closed down. However, in urban areas there was often only a reduction of beds without closing facilities, with specialized hospitals in the capitals largely unaffected, or overprovision in urban areas even increasing. Thus, specialist health-care providers in urban areas have been largely successful in maintaining overlapping services and avoiding hospital closures. Even in the Republic of Moldova, which has been at the forefront of primary health-care reforms in the region, there were substantial reductions in the number of hospitals, but secondary and tertiary care facilities in the capital were largely unaffected and still absorb a significant amount of funding (Atun et al., 2008). Georgia initially opted for extreme privatization but regulation of the privatization process was weak; bids that promised capacity over and above what was required were

viewed more favourably and interest from investors focused on prime sites in the capital (Chanturidze et al., 2009). An extreme example is Belarus, which has more hospital beds per capita than any other country in the former Soviet Union or the EU despite the conversion of some beds in rural hospitals into long-term and respite care beds (Richardson et al., 2013). In Ukraine, only small rural hospitals were closed or turned into outpatient clinics, while the number of secondary and tertiary facilities has remained virtually unchanged (Lekhan, Rudiya & Richardson, 2010).

Although there has been a near-universal endeavour to strengthen primary care, hospital care continues to dominate national health systems. In 2009 in the Russian Federation, 59% of expenditure within the programme of government guarantees went on inpatient treatment, 34% on outpatient treatment and 7% on emergency care (Popovich et al., 2011). However, expenditure may be even more skewed towards inpatient care, as only 12% of physicians work as generalists in primary care and 92% of regional budget expenditure goes to inpatient care (Popovich et al., 2011). In Ukraine in 2012, 67% of government expenditure on health went to hospitals, specialist facilities and sanatoria (State Statistical Committee, 2014). In Azerbaijan, in 2008, hospitals received three times more budgetary resources than polyclinics (Ibrahimov et al., 2010). In Kazakhstan in 2008, 53.4% of total public expenditure on health was allocated to inpatient facilities and only 20.3% to outpatient facilities (Katsaga et al., 2012). Reasons include high levels of hospitalization, the hospitalization of patients who could have been treated in outpatient settings, a high average length of stay and a vast inpatient infrastructure (Katsaga et al., 2012). In Georgia, patient preferences for hospital services rather than primary health care were identified as a major reason for imbalances in resource allocation. Even in rural areas, consultations with specialists and hospital doctors account for at least two-thirds of first consultations (Chanturidze et al., 2009). Poor gatekeeping, unnecessary referrals to hospitals, self-referral to secondary and specialist care and generally high rates of hospitalizations, due to perverse incentives, are other reasons for the dominance of hospitals in resource allocations in many post-Soviet countries (Atun et al., 2008; Khodjamurodov & Rechel, 2010). Furthermore, as emergency care is formally free of charge and facilities relatively well-equipped, patients access them directly rather than going to more appropriate levels of care (Ahmedov et al., 2007). Excess hospital capacity remains a challenge across the region (see Chapter 8); yet many people still have trouble in obtaining care when needed (Balabanova et al., 2012).

However, the share of resources devoted to primary health care has increased in several countries. In Belarus, the proportion of total health expenditure spent on inpatient services declined from 60% in 2000–2001 to 44% in 2010

(Richardson et al., 2013), while in Kyrgyzstan an increasing share of public expenditure within the state-guaranteed benefits package is going to primary health care, from 26.4% in 2004 to 37.7% in 2009 (Ibraimova et al., 2011). In Ukraine's pilot regions, expenditure on primary health care also increased, although from a very low base, from 9.1% of the overall health budget in 2012 to 19.5% in 2013 (Ukrainian Institute of Strategic Studies, 2014).

New mechanisms for paying health-care providers also featured in financing reforms, seeking to provide incentives for rationalization and increased allocative and technical efficiency. In the Soviet period, allocations to providers depended on inputs (beds and staff) and followed strict line items, resulting in structural inefficiencies, excess capacity and very little managerial autonomy. The allocation of resources did not take account of health needs, performance, productivity or quality of care (Atun et al., 2008). This approach is still used for paying health-care providers in Azerbaijan and Ukraine (except in some pilot regions) (Ibrahimov et al., 2010; Lekhan, Rudić & Richardson, 2010) and for paying hospitals in Belarus, Tajikistan and Uzbekistan, providing incentives to use hospitals irrespective of need (Ahmedov et al., 2007; Richardson et al., 2008; Khodjamurodov & Rechel, 2010).

However, almost all countries of the region have now introduced capitation as the main method of funding for primary care. In the Russian Federation, partial fundholding for outpatient facilities has been implemented in several pilot regions. This has created incentives for providers of outpatient care to increase their effectiveness and has resulted in decreased hospital admissions and ambulance call-outs (Popovich et al. 2011). Mechanisms for pooling and allocating funds have also been revised, with the introduction of a purchaser-provider split and a single payer system in some countries, such as Kyrgyzstan, with others, such as Ukraine, aiming to consolidate their public expenditure on health, starting in the country's pilot regions.

Hospitals in most post-Soviet countries are now generally paid on the basis of global budgets or cases treated (Fuenzalida-Puelma et al., 2010). In the Russian Federation, provider payment mechanisms were identified as the main obstacle to improved allocative and technical efficiency (Popovich et al., 2011). In order to address these inefficiencies in 2014 the country started to pay hospitals on the basis of DRGs.

Finally, allocative efficiency is undermined not only by regional disparities – with an oversupply in the capitals and major cities and shortages in rural areas – but also by major differences across different regions. In the Soviet period, resource allocations were made on the basis of existing capacities so that the bulk of resources went to urban centres, which housed the largest number of

facilities (Atun et al., 2008). These imbalances were inherited by all countries in the region and they are only slowly embracing more equitable forms of allocating resources. In the Russian Federation, for example, there is a very uneven distribution of health financing across regions. The difference between maximum and minimum government health financing per capita across regions in 2009 was 6.8 times, from 2082 roubles per capita in Chukotka Autonomous Okrug to 14 094 roubles in Moscow (Popovich et al., 2011). In Tajikistan, too, there are significant inequities in the level of health expenditure across *oblasts* and *rayons*. In 2008, health expenditure per capita was 4.25 higher in Shrabad *rayon* than in Khamadoni *rayon* (Khodjamurodov & Rechel, 2010).

However, several countries have established mechanisms for more equitable resource allocations across regions. Examples include Ukraine, Kazakhstan and Belarus. In Ukraine, budgetary reforms in 2001 led to a reduction in inequalities between different regions; the Ministry of Health has also introduced a single unified pool for all local primary care services in the country's pilot regions. In Kazakhstan, the difference in per capita health financing from public sources between the richest and poorest regions decreased from 4.2 to 2.1 times between 2001 and 2008 (Katsaga et al., 2012). In Belarus, a system of equalization of local budgets has been set up, with reallocation of funds from more affluent areas to poorer regions (Richardson et al., 2013).

Technical efficiency

Technical efficiency means making the best use of available resources (Durán et al., 2012). The continued reliance on inpatient care across the region is one of the factors that undermines technical efficiency, as hospitals are expensive and often fail to provide value for money. However, reductions in hospital capacity in many countries meant that less health expenditure is absorbed by fixed costs and more can be spent on pharmaceuticals, medical supplies and staff. Increasing efficiency in this way does not need to be detrimental to other health system goals and can improve equity and access of low-income groups (Durán et al., 2012).

Yet there continues to be an over-reliance on hospitals for treating conditions that could be treated in primary care. Reasons include poor gatekeeping, poor integration of care, the link between bed occupancy and funding, and the provision of social and long-term care by hospitals (Marx et al., 2007; Raikhel, 2010). In Kyrgyzstan, a study of selected conditions found that half of hospital admissions were inappropriate (Ibraimova et al., 2011). In the Russian Federation and Ukraine, it has been estimated that about one-third of all hospitalizations are unnecessary (Vishnevskiy et al., 2006; Lekhan, Rudiy & Richardson, 2010); in Ukraine it has been estimated that the average cost in an

outpatient care setting would be about four times lower, indicating significant scope for improved technical inefficiency (Lekhan, Rudiya & Richardson, 2010).

Low occupancy rates and long average lengths of stay in acute care hospitals indicate that hospitals do not work as efficiently as they could (see Chapter 8). Although the average length of stay has decreased across the region, it is still higher than in the EU, whereas bed occupancy rates in acute care hospitals are much lower in several countries than in the EU, reaching only 41.5% in Azerbaijan and 35.7% in Georgia in 2012 (WHO, 2014a). In Belarus, the average length of stay in hospitals declined rapidly following the introduction of norm-based (rather than capacity-based) provider payment mechanisms (Richardson et al., 2013). However, bed occupancy rates and average length of stay not only suggest inefficiencies, but can also be indicative of problems in accessing hospital care, such as in Georgia which has a very low bed occupancy rate and a short average length of stay (Chanturidze et al., 2009).

The equity and efficiency of post-Soviet health systems are also undermined by the continued existence of another Soviet legacy: parallel health systems outside ministries of health. In some countries, access to these parallel structures is no longer confined to certain employers but there are still restrictions in terms of ability to pay OOP or via voluntary health insurance schemes. Some countries, such as Belarus (Richardson et al., 2013), have begun to integrate them into the mainstream health system and their importance now varies in terms of the role they play in relation to the mainstream health system and the financial allocations they receive. In Ukraine in 2012 they accounted for 8.8% of all hospital beds and 7.5% of total public expenditure on health, while in Georgia less than 1% of total health expenditure is spent in parallel health systems (Chanturidze et al., 2009).

Separate vertical disease management structures, such as for HIV/AIDS, are another source of fragmentation and inefficiencies. In Kazakhstan, for example, there are many narrowly specialized facilities, such as separate paediatric hospitals, maternity hospitals, oncology centres and infectious disease dispensaries (Katsaga et al., 2012). These lead to duplication and impede integration of care.

The issue of pharmaceuticals is another area where the need for greater technical efficiency has been recognized. As discussed in Chapter 9, in several post-Soviet countries, pharmaceuticals account for a large share of private OOP spending. In Belarus, for example, they were estimated to account for 73% of OOP spending in 2010 (Richardson et al., 2013). Reasons include the limited scope of benefits packages, the underuse of generic drugs and the sale of prescription drugs over the counter in pharmacies. Many countries in the region are planning

to scale up domestic manufacturing of pharmaceuticals instead of having to use higher cost imports (Popovich et al., 2011; Richardson, 2013).

Finally, the limited use of evidence on effectiveness and cost-effectiveness to inform health policy-making and priority setting is an obstacle to increased technical efficiency in the post-Soviet countries. Health technology assessment is not widely used in the region and evidence-based medicine is still underdeveloped (see section above on *Quality of care*).

Transparency and accountability

A number of barriers to greater transparency and accountability have been identified in the former Soviet countries, including the existence of informal OOP payments, limited information on the performance of health-care providers, limited involvement of the population and of health workers in health policy development, corruption, and generally authoritarian political systems and decision-making structures.

As discussed in Chapter 4, informal OOP payments persist in most countries of the region. These funds are not accounted for and undermine transparency and other health system goals, including equity, efficiency and (potentially) quality. One of the reasons for the persistence of informal payments is the low awareness of entitlements and payment obligations, which is another indicator of a lack of transparency. Broader problems include tax evasion and the existence of informal economies. In Armenia in 2008, for example, informal activities were estimated to account for about 11% of GDP (Richardson, 2013), while in Ukraine in 2010, this percentage reached 40% (Tischuk, Kharazishvili & Ivanov, 2011).

Across the region, information on provider performance is not yet routinely available and mostly based on hearsay. In general, patients perceive secondary and tertiary care services provided in major cities and capitals to be of higher quality and some opt for the private rather than public sector in the hope of receiving better services and benefiting from more up-to-date equipment. This general lack of information on provider performance means that there are few incentives to improve quality and patient satisfaction.

Finally, there has been a trend in several countries towards increased involvement of professional associations and NGOs in health policy development, although still without full public involvement (Katsaga et al., 2012; Richardson, 2013; Richardson et al., 2013). The Russian Federation has sought to improve public participation with online consultations of national health policies but even there the actual involvement of the public is still limited (Popovich et al., 2011). An

assessment of health reforms in central Asia has found that the involvement of the general population and of health workers has made a positive contribution to reforms but that it was missing in reform attempts that failed. This might not be surprising in many countries but is important in the political context of many former Soviet countries, which are characterized by the strong role of the executive and the powers vested in the presidency. It seems that even in less permissive political environments, health reforms depend on the buy-in of health workers and the general population (Rechel et al., 2012). Involving both the public and health workers in health reforms would increase the chances of successful reforms and help to build clarity around the priorities of the health system.

Conclusion

This chapter has provided an overview of the performance of post-Soviet health systems. In many cases, there is a lack of solid data to accurately measure key dimensions of health system performance. Nevertheless, major concerns can be identified, often addressed to varying degrees by ongoing health policy endeavours.

Among the major cross-cutting themes are the various ways in which the high share of private OOP expenditure in many countries undermines key health system goals, including financial protection, equity (in terms of both financing and accessing health services), efficiency and quality. This high reliance on OOP expenditure is partly due to countries' overall socioeconomic context and also due to political decisions about the share of public resources to invest in health.

Another major theme is the extent of pronounced regional inequities in health financing, health care utilization and health outcomes. While some of these inequities are deeply entrenched and difficult to address, such as the divide between urban and rural areas, some countries have begun to reduce regional inequities through the reallocation of resources from richer to poorer regions, with promising results.

The current configurations of health systems result in major inefficiencies not only in terms of how resources are allocated to different parts of the health system but also how they are then used, with the continued reliance on hospital care a major concern. Quality of care is another issue that has been recognized by many post-Soviet countries as a priority and health systems of the region do not do as well as they could in improving population health.

Finally, stronger governance mechanisms are required that can improve the transparency and accountability of health systems, while ensuring patient rights

and taking account of the experience of users. They will also need to make more effort to measure the performance of health systems, allowing for more targeted improvements in the future.

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Chapter 12

Conclusions

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Introduction

This volume has provided an overview of health systems and policies in 12 countries that emerged from the former Soviet Union, documenting how far they have come in reforming the health systems they inherited from the Soviet period. The book follows a functional perspective on health systems (Durán et al., 2012), describing how key functions are undertaken in each of the post-Soviet countries, in line with the structure of the European Observatory's health system reviews (Rechel, Thomson & van Ginneken, 2010).

The Observatory's health system reviews provide a useful basis on which to build a comparative analysis of health systems and policies, providing in-depth information on the full range of health system functions according to a standardized template. However, they also have certain drawbacks. One is that publication dates differed and information on some countries is more up-to-date than on others. Health system reviews also differ in length and detail. Furthermore, authors are left a degree of freedom in how far they develop different sections and the template itself has changed slightly over the years, with additions, such as on intersectoral working, that have only been covered in health system reviews since 2010. As far as possible, the authors aimed to make up for these shortcomings by using additional sources of information, most importantly the relatively sparse peer-reviewed articles from this region. A draft of the book was also shared with national and international experts and their feedback incorporated.

This chapter draws together the main findings of the book. It argues that the reform agenda is in many respects unfinished. However, policy-makers in the region could draw encouragement from the seemingly widespread willingness in the population to put health higher on the political agenda.

Even with the limited resources that finance ministries have made available, health systems in the region could achieve better results. For this, they will need to become more equitable, accessible and efficient, delivering effective health care – and, equally important, withdrawing ineffective care – and will need to strengthen public health action and intersectoral collaboration for health.

A persisting health gap

The countries of the region do not yet perform adequately when it comes to the fundamental goal of health systems: improving population health (WHO, 2000). The Soviet health system was successful in scaling up basic interventions, such as those against infectious diseases, but failed to tackle the growing challenge of noncommunicable diseases (McKee, 2007), a legacy that is still felt in many post-Soviet countries today (Rechel et al., 2013).

Since the 1960s a health gap has emerged between what was then the Soviet Union and countries in western Europe that persists (and in some cases is widening) to the present day. People in the former Soviet countries continue to die at a much younger age than their counterparts in western Europe (World Bank, 2005). Strikingly, this is even the case in countries with booming economies (Azerbaijan, Kazakhstan and the Russian Federation), where the growth in GDP has not been accompanied by a correspondingly large improvement in lifestyles or access to effective care. In fact, life expectancy in the Russian Federation remains one of the lowest in the region, despite recent gains (Shkolnikov et al., 2013).

The main reasons for this persisting gap in life expectancy are premature deaths from diseases of the circulatory system (most notably ischaemic heart disease), cancer and external causes such as injuries, violence and poisoning. In 2011, directly standardized all-cause mortality rates for under 65 year olds per 100 000 population exceeded the EU average by a factor of three for males (801 and 269 per 100 000 respectively), while mortality rates were twice as high for females (308 and 131 per 100 000 respectively). Much progress has been achieved in the region in the area of infant and maternal mortality but these still far exceed levels seen in western Europe. Mental health and communicable diseases are other major areas of concern, with health systems struggling to provide timely, appropriate and well-coordinated care.

Several immediate risk factors for poor health and premature mortality stand out: alcohol consumption (in particular of spirits and surrogate alcohols, such as aftershaves) (Gil et al., 2009), smoking, poor nutrition and lack of physical activity. These call for improved intersectoral action on health, with a focus on measures that work, targeting price, availability and marketing, rather than

the relatively ineffective educational programmes favoured by the alcohol and tobacco industries. However, there is an obvious role for health care too, both in promoting healthier lifestyles and also in the early detection and management of risk factors (such as high blood pressure or elevated cholesterol), with a particular focus on treatment adherence (Roberts et al., 2012b) and rapid effective responses to acute events such as heart attacks or strokes.

The need for better data

High quality data on the health of the population are essential to plan effective health policies (Verschuuren et al., 2014). Yet, as noted in many contributions to this volume, such data are missing or incomplete in many of the former Soviet countries. Typically, this leads to health problems seeming less than they are in reality: infant and maternal deaths tend to be undercounted, morbidity is not sufficiently captured and reported life expectancy appears greater than it really is (Glonti & Rechel, 2013).

In addition to major weaknesses in vital statistics and data on causes of death, and unreliable statistics on morbidity (such as missing data from the private sector), information is often incomplete on many other aspects of health systems. In particular, there is a dearth of data on health service outcomes (such as cancer survival or post-operative mortality) (Smith, Mossialos & Papanicolas, 2012). In many post-Soviet countries, these measures are not yet routinely collected, making it very difficult to judge the quality of care patients receive (Richardson, 2013; Richardson et al., 2013). Across the region, information on provider performance is not yet routinely available and mostly based on hearsay. Little is known about public and patient satisfaction with the health system and health financing data is incomplete in some countries, especially in respect of expenditure on prevention and public health (see Chapter 6). Health information systems have struggled to move away from measures of inputs to outcomes, which are needed to improve health system performance and management (Chanturidze et al., 2009).

Reducing inequities

The contributions to this volume have highlighted major inequities across and within countries of the region, concerning infrastructure, financing, access to care and health outcomes. Within countries, there are often inequities between urban and rural areas and across different regions. In the Soviet period, resources were allocated on the basis of what was already there so that the bulk of resources went to urban centres where facilities had, historically, been concentrated (Atun

et al., 2008). These imbalances were inherited by all countries of the region and they are only slowly embracing more equitable forms of allocating resources. However, several countries have now put such mechanisms into place.

In addition, there are major inequities between different groups within the population. In several countries, utilization of health services is higher among the wealthy, who typically have least health needs. A major factor is the widespread use of private OOP payments in many countries, making health financing highly regressive, leaving people at high risk of catastrophic expenditure and thus of impoverishment. As a result of these financial barriers to health care, many in need of health services are not able to access care. Improved risk pooling, with a greater share of public resources being devoted to the health system, could help to reduce such inequities and improve financial protection.

Improving access

As the previous section noted, many countries of the region have persisting financial and geographical barriers to accessing health services. Geographical barriers (in particular to secondary and tertiary care) are particularly a concern in countries with vast territories and low population densities (such as the Russian Federation and Kazakhstan) or with mountainous terrains (Kyrgyzstan and Tajikistan). Health facilities, workers and per capita financing tend to be unequally distributed, with an oversupply in capitals and major cities and shortages in rural areas and in primary health-care facilities. Following large-scale privatization, most countries have overprovision of pharmacies in urban areas and underprovision in rural areas, where many pharmacies have closed. Some countries have tried to maintain some degree of equity of geographical access to primary health care but in others, such as Georgia and Armenia, the primary care network has effectively disintegrated (see Chapter 7).

Financial barriers have increased as a result of growing reliance on private OOP expenditure (both formal and informal) by patients, which is of greatest concern in Georgia, Azerbaijan and Tajikistan. The reliance on private OOP payments for health services and pharmaceuticals in many countries of the region and inadequate risk pooling has meant a high risk of catastrophic or impoverishing health expenditure, even for higher income households (see Chapter 11). The limited coverage by benefit packages is another challenge. The introduction of mandatory health insurance systems has been a catalyst for health financing reforms in some countries, such as Kyrgyzstan, but has also led to the exclusion of those who did not make contributions or were otherwise not covered by budget transfers. In the Russian Federation, in contrast, enrolment in the mandatory health insurance system was based on place of residence and

citizenship, rather than formal employment, and population coverage is much higher.

As mentioned in Chapter 11, a survey in eight post-Soviet countries conducted in 2010 found that most respondents who used health services paid for them OOP, with median amounts varying from \$13 in Belarus to \$100 in Azerbaijan. There were also major differences in terms of what was paid for. Payments for inpatient care and pharmaceuticals were common but only 5.7% of respondents in the Russian Federation reported payments for outpatient care, compared to 43.6% in Kazakhstan (Balabanova et al., 2012). Almost half of respondents with a health problem in the previous month had not sought care, most often due to the costs involved. However, unaffordability differed widely across countries, ranging from 69.7% in Georgia and 58.1% in Azerbaijan to only 4.6% in the Russian Federation and 2.9% in Belarus (Balabanova et al., 2012). It is clear that many countries of the region have far to go to achieve effective risk pooling, extend benefits packages and decrease OOP payments.

While shortages of pharmaceuticals also occur in hospitals, access to outpatient pharmaceuticals (which are usually excluded from benefit packages) and the related burden of OOP spending have now become some of the most pressing health policy issues in all former Soviet countries and even vulnerable population groups have to pay for their medications OOP most of the time (see Chapter 9). Consequently, pharmaceutical costs still constitute a major barrier to care, with patients foregoing necessary treatment as a result (Smith & Nguyen, 2013; Footman et al., 2014). Furthermore, the use of generics is still underdeveloped and capacity for domestic pharmaceutical production is patchy (see Chapter 9).

Making better use of resources

While some of the countries of the region have only limited domestic resources to spend on health, it is also clear that existing resources could be used better. There are several reasons for the current waste of resources. One of the main factors is poor allocative efficiency (see Chapter 11), that is, the continued reliance on hospital care and the related neglect of primary health care. While all countries have reduced hospital capacity, closures were often confined to small rural facilities, and few hospitals in urban areas were affected and politically powerful tertiary care facilities have remained virtually immune to downsizing attempts (see Chapter 8). Despite having much more limited resources, most of these countries have more acute care hospital beds per capita than EU member states and patients in most post-Soviet countries tend to stay in hospitals far longer (WHO, 2014). There is also a common practice

of admitting patients to hospitals inappropriately, with conditions that would be treated better in primary care. In some countries of the region, patients are up to 10 times more likely to be hospitalized for hypertension than in OECD countries, a condition that rarely requires hospitalization in western countries (Smith & Nguyen, 2013). Other examples of conditions that are commonly treated in hospitals rather than outpatient facilities include TB, diabetes and drug addiction (Rechel et al., 2011). Reasons for keeping patients in hospitals longer than necessary include a weak gatekeeping system in primary care, poor integration of care, incentives for over-hospitalization because of the link between bed occupancy and funding, and the way that hospitals provide social and long-term care rather than acute services (Marx et al., 2007; Raikhel, 2010). The continued reliance on parallel health systems, such as those run by the military or transport ministries, is another cause of inefficiency in some countries, although most have started to scale down these systems.

All former Soviet countries have embarked to varying degrees on attempts to strengthen primary health care and thus use resources more efficiently (Rechel & McKee, 2009). Most commonly, however, the Soviet model of primary health care, delivered by poorly trained doctors able to treat a narrow range of conditions, has been retained and primary health care based on a model of comprehensive family medicine is confined to pilot sites. Exceptions are Kyrgyzstan, Ukraine and the Republic of Moldova (see Chapter 7). In general, the desired efficiency gains have often not been achieved (Boerma et al., 2012) and progress in primary health care reforms was generally slow (see Chapter 7). One challenge was that resource allocation still prioritizes secondary and tertiary care. Lack of functioning gatekeeping and referral systems, a resulting poor integration of care, and low public confidence in primary health care are other problems. Moreover, primary health-care facilities in rural areas also find it difficult to attract staff and secure other resources. Consequently, strengthening primary health care in the region will require the appropriate allocation of resources for human resources and equipment, investments in the training of staff (see Chapter 5), improved quality of care through the development and implementation of clinical practice guidelines and the enforcement of quality assurance mechanisms (see Chapters 3 and 11), more clearly delineated levels of care, and improved gatekeeping and referral mechanisms (see Chapter 7).

Mechanisms for paying providers are another source of inefficiency (see Chapter 4). A major share of health expenditure originates from private OOP payments, which means that ministries of health have few mechanisms to influence the care provided. Mechanisms for pooling funds to pay providers have been implemented in many countries with the aim of improving efficiency, providing incentives for rationalization and increasing allocative and technical

efficiency. Experiments with output-based financing of hospital care are under way in a number of countries, while primary health care is increasingly funded on a capitation basis. Attempts are also under way in most post-Soviet countries to increase the managerial autonomy of hospitals and primary health-care providers. However, it is unclear how far these reforms have improved the efficiency of health systems.

The purchase of pharmaceuticals is another area in which efficiency gains could be achieved. Although policies to control the prices of pharmaceuticals have been discussed in most post-Soviet countries, there is much waste in the purchase of pharmaceuticals, as many are purchased directly by patients, centralized purchasing has often been abandoned, the implementation of essential medicines lists is patchy and substitution of brand-name pharmaceuticals with generics continues to be challenging. Furthermore, there are incentives for doctors to over-prescribe and there is a preference among both doctors and pharmacists for newer, more expensive, but rarely more effective drugs. At present, over-the-counter access (at a price) to almost all pharmaceuticals means that, potentially, a significant proportion of household expenditure is spent on ineffective and possibly dangerous use of pharmaceuticals (see Chapter 9). Improving cost-effectiveness in the procurement of pharmaceuticals could be a major step towards making better use of existing resources.

Improving quality

Improving efficiency and equity will not be enough, as long as the quality of care remains poor. One of the main concerns across the region is the poor management of cardiovascular risk factors in primary care. Hypertension, for example, is one of the leading causes of avoidable mortality in the former Soviet countries (Roberts et al., 2012b). Yet, surveys have shown that only a very low percentage (less than 10% in many post-Soviet countries) of those with high blood pressure take the necessary medication regularly (Roberts et al., 2012a), and treatment rates for those with high levels of cholesterol are even lower (Smith & Nguyen, 2013). There is also much room for improving clinical care. A survey in 2011 found that only about 30% of hospital doctors in Tajikistan would correctly diagnose a heart attack and only 38% had received any kind of continuing medical education in the preceding 12 months (Smith & Nguyen, 2013).

A number of challenges will have to be overcome to improve quality of care in the post-Soviet countries, including replacement of outdated infrastructure and equipment (and appropriate use of new technology), lack of health workers in rural areas and underdeveloped mechanisms for quality assurance (Rechel et

al., 2011). The persistence of obsolete Soviet practices is another challenge, for example in the treatment of people who are addicted to alcohol or illicit drugs. So far, reforms to mental health care have been especially neglected, although pilot community mental health centres were set up in many countries and the length of stay in psychiatric hospitals is decreasing (see Chapter 10). Fake or poor-quality pharmaceutical products and poor regulation of pharmaceutical sales are another concern (see Chapter 9). The easy availability of first- and second-line antibiotics for the treatment of TB, for example, has been identified as a major driver of multiple drug resistance in this disease (Mosneaga et al., 2008). While many initiatives for improving the quality of care are ongoing, much more clearly remains to be done.

Strengthening governance

It is apparent throughout this volume that the former Soviet countries differ tremendously in their subsequent paths. Many have faced severe economic hardship, some had to deal with civil war but others were able to exploit substantial natural resources, leading to an oil- and gas-fuelled economic boom. These different political, social and economic contexts had a profound impact on the region's health systems; per capita health expenditure for example differs hugely.

Yet, the health systems of the region also face many of the same challenges. These include lack of transparency and accountability, large informal sectors, underdeveloped systems to ensure patient rights, lack of awareness of entitlements, fragmentation across different tiers of government, insufficient regulation of the private sector and a limited involvement by the public and of professional associations in health policy development (see Chapter 3). In the poorer countries of the region, especially, international agencies have been powerful agents of change but at times have undermined national ownership and sustainability (Rechel & Khodjamurodov, 2010; Ancker & Rechel, 2013).

Many of these common challenges relate to poor governance. Improving health systems will thus require strengthened mechanisms for steering and regulating health systems. This will include tackling informal payments through comprehensive reforms that strengthen the regulation of the health system, improve transparency and knowledge about entitlements, strengthen redress mechanisms, improve the responsiveness of services, increase the low wages of health workers and, perhaps most importantly, ensuring the quality of care for all patients. The broader political context matters too and strengthening democratic traditions will also benefit the health system.

Investing in health

In the Soviet period, health was considered an unproductive sector and priority was given to other parts of the economy, most notably the military (Suhrcke, Rocco & McKee, 2007). Unfortunately, this legacy persists in many countries of the region, despite growing evidence of the ways health systems contribute to wealth and societal well-being (Figueras & McKee, 2012). The immediate period after the collapse of the Soviet Union saw a collapse of government expenditure on health and in many countries private, OOP payments have become important in filling the resulting gap. As discussed in Chapter 4, in five of the 12 countries public sector health expenditure as a proportion of total health expenditure was below 50% in 2012. This low percentage partly reflects the different socio-economic contexts of the countries in question but it is also indicative of the priority (or lack thereof) afforded to health.

Some countries of the region have placed a higher priority on health than others; this generally entailed attempts to improve risk pooling and devote a higher share of public resources to the health system (Rechel et al., 2013). However, even within these countries, approaches have differed widely. Some (in particular Kyrgyzstan and the Republic of Moldova) have become regional pioneers of health reform, pursuing far-reaching health financing reforms and pushing forward the model of family medicine. Others (in particular Belarus) have preserved many elements of the Soviet system of health care, with its emphasis on universal coverage and affordable health care. The lesson is that there is no uniform model that should be followed by all but that there are different approaches that can be taken to achieve the common goal of health systems strengthening. At the same time, health systems in the region could make much more progress in improving population health, even though some of them have only limited resources and some of these resources (in particular OOP payments) are outside the influence of government.

Improving population health will be paramount. The discussion of amenable mortality and tracer conditions as a means of assessing health system performance in Chapter 11 has shown that the health systems in the region still perform poorly, in particular where complex and integrated care is necessary, such as for diabetes or MDR-TB. In order to start closing the health gap that has emerged between the region and western Europe, it will be important to achieve a similar 'cardiovascular revolution' to that seen in the west (Smith & Nguyen, 2013). In industrialized countries, between 40% and 50% of the decline in ischaemic heart disease in recent decades can be attributed to improvements in health care, while the remainder has been attributed to public health measures addressing the main risk factors, such as smoking, diet and physical activity (Kuulasmaa et al., 2000; Nolte, Bain & McKee, 2009). This illustrates the need

for both improved clinical care and strengthened public health action. In the latter area, health promotion and intersectoral action for health continue to be two of the most underdeveloped and underfinanced domains of public health in many post-Soviet countries, despite increased verbal commitment (Maier & Martin-Moreno, 2011). Population-based measures, such as tax increases on alcohol (in particular spirits) and tobacco and smoking bans in public places, will be particularly important to address the pre-eminent risk factors for morbidity and mortality in the region and can build on popular support for stronger anti-tobacco and anti-alcohol policies (World Bank, 2010; Roberts et al., 2012a; Smith & Nguyen, 2013).

More generally, there seems to be a huge untapped potential to afford health a higher place on the political agenda of most countries of the region. People want to live long and healthy lives. When asked which areas should be tackled by extra government spending (being given a choice of seven options), respondents in the 12 former Soviet countries considered in this volume (excluding Turkmenistan) considered health care the first priority in nine countries and the second in two (EBRD, 2010). Policy-makers in the region should aim to capitalize on this support.

Above all, effective stewardship by governments is required to push the reform agenda forward. Lessons learnt from health financing reforms in the region (Kutzin, Cashin & Jakab, 2010) provide important pointers on how to sequence and implement successful health reforms. Among others, they require a broadly agreed road-map and guiding principles for reform, powerful change agents, public buy-in, consistency in the direction and content of reforms, and the use of evidence for public accountability and to guide further decision-making.

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